FONTS Buyer's Guide – see p. 43

AMIGA WORLD

May 1993
U.S.A. $3.95
Canada $4.95
UK £2.95
An IDG Communications Publication

LOOKING FOR A REAL "CHANGE"?

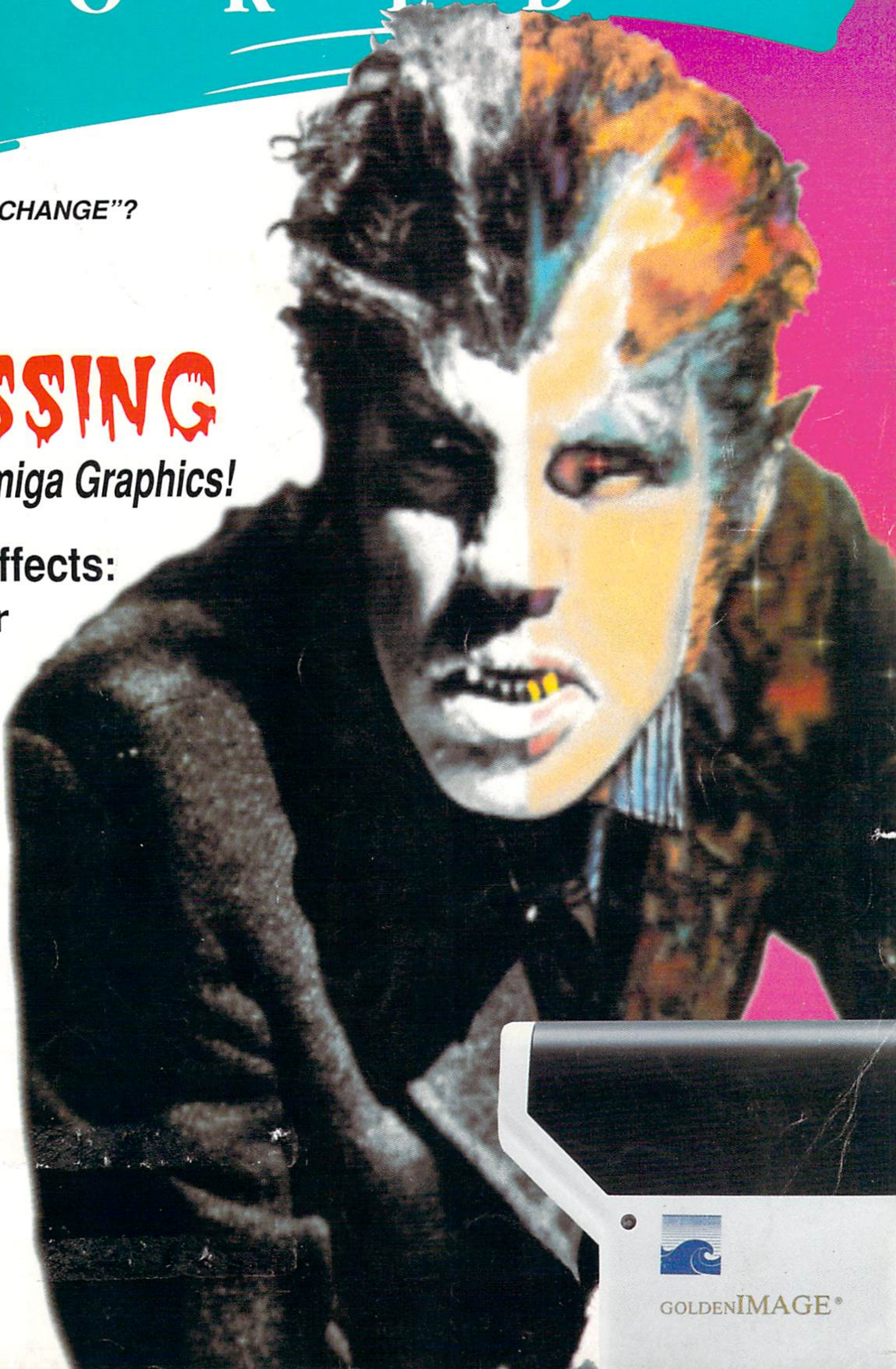
IMAGE PROCESSING

Transform Your Amiga Graphics!

Head-To-Head Effects:
- Imagemaster
- ImageFX
- ADPro

Slick Tricks With 7 Top Programs

PLUS!
- Quality Fonts Galore!
- Easy Audio For Video
- Workbench 2.0 Tips
- Fun DTP Projects
- Reviews, Games . . . *More!*



05
0 74470 65948 8

NOW A4000 / AGA CHIP SET COMPATIBLE FOR 256 COLORS ON SCREEN!

PROFESSIONAL PAGE® 4.0

THE BEST PROFESSIONAL PUBLISHING SYSTEM FOR THE AMIGA, EVEN FOR THOSE WHO DON'T WANT TO MAKE A CAREER OF IT



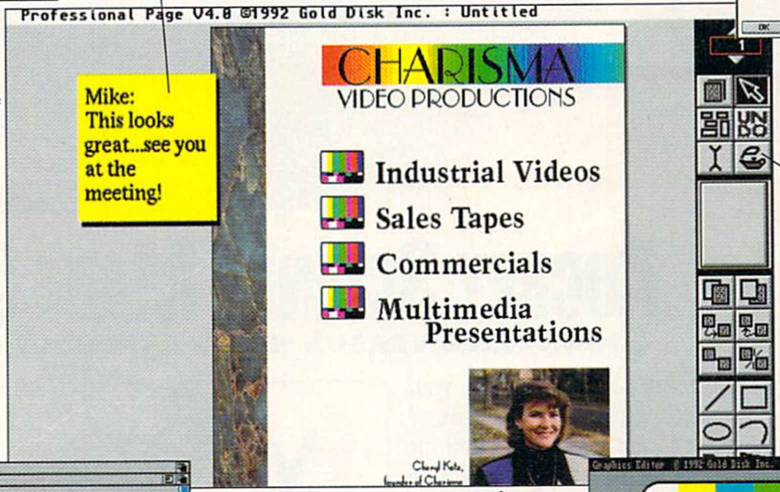
The new Font Preview saves you time by letting you see your fonts before you apply them!

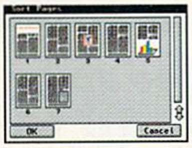
Non-printing stick on style notes make it easy to leave reminders for yourself or others.

User-definable Zoom means you'll get the view you want, from 10% to 400% for greater precision!



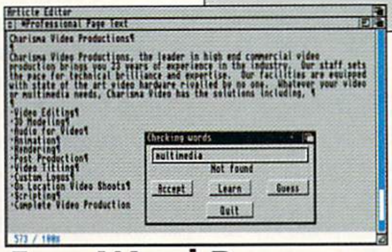
The built-in Pair Kerning lets you visually adjust letter pairs for automatic kerning!





The unique Page Sorter lets you easily arrange your pages using just your mouse!

Page and Function Genies actually layout your pages for you and perform all kinds of tasks like table creation, drop caps and more. 4.0 has even more time saving Genies. And you get a special Genie Editor that makes it easy to write your own.

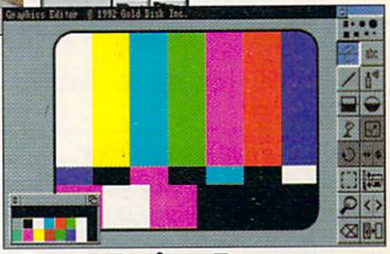


Free Word Processor

- Mouse click brings your text here for super fast editing and changes!
- Full high speed word processor!
- 90,000 word spell checker!

A4000 / AGA chip set support lets you see up to 256 colors on screen at once for a photo-realistic view of your work.

Import graphics from a wide range of formats and platforms, including: IFF, GIF, TIF, PCX, BMP, Pro Draw, EPS with TIF preview header, PLUS Adobe Illustrator and Aldus Freehand files can be imported and even hot-linked to Professional Draw for editing!



Free Paint Program

- Mouse click brings your graphic here for super fast editing and changes!
- Full paint program lets you create or edit graphics quickly and easily!

THE BEST PROGRAM

The new Professional Page 4.0 makes it easier than ever to produce professional documents that enhance your image and improve your business. A host of new graphic and text import filters give you greater connectivity to other programs and other platforms. The free hot-linked word processor and paint program make your work faster and changes easier.

In fact, from the new font preview to the variable zoom to the advanced visual page sorter, Professional Page 4.0 makes professional layout a snap. You can even see and edit two pages at once. Or visually change the kerning of your fonts. And don't forget the Genies that will layout your pages for you and even perform mail merge and other time savers.

No matter what your business is, from Desktop Publishing to Video Production, Professional Page is the answer to quickly creating great looking documents that make you money.

THE BEST VALUE!

And speaking of money, all this extra value still sells for the same low price of $295 MSRP. If you already own Professional Page, call right away for your upgrade, a real steal at only $75. And if your dealer doesn't have version 4 yet, don't panic, just buy version 3 and we'll give you a free upgrade.*

You can't lose with Professional Page 4.0, the consistent leader in Amiga publishing. Period.

See Your Dealer or Call 1-800-465-3375 / 1-416-602-4000

GOLD DISK
P.O. Box 789 Streetsville
Mississauga, Ontario L5M 2C2 Canada
Circle 154 on Reader Service card.

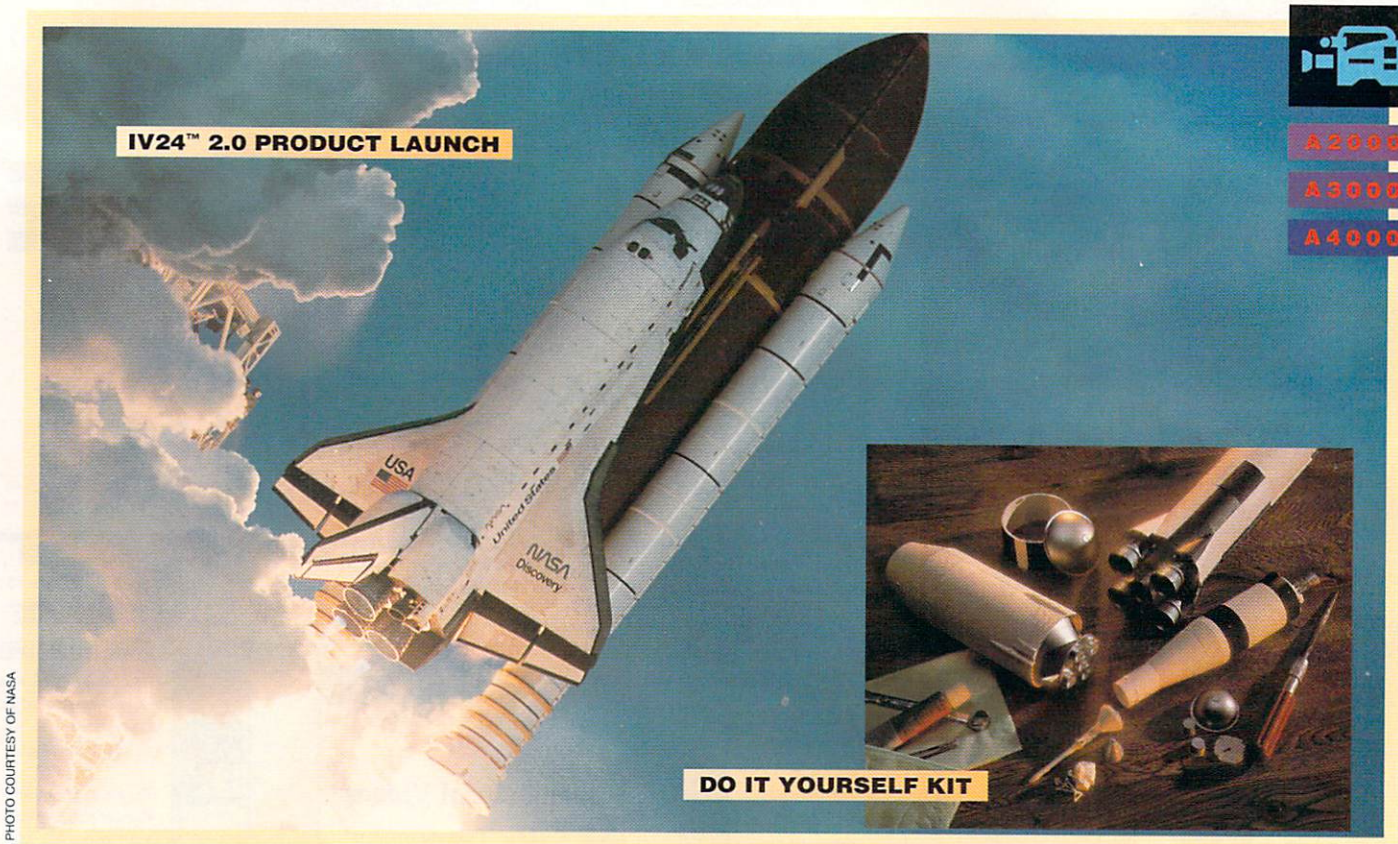
*To get your free upgrade send in your registration card and proof of purchase dated between 12/1/92 and 3/1/93. Please mark the envelope "Professional Page 4 free upgrade." Gold Disk, Professional Page, and Professional Draw are registered trademarks of Gold Disk Inc. All other products mentioned are trademarks of their respective owners.

Gold Disk Authorized Software Centers

Gold Disk products are available at most Amiga dealers. The following dealers have qualified as Gold Disk Authorized Software Centers and carry a complete range of Gold Disk products. See one today!

Alaska: Best Electronics, Anchorage (907) 278-2378 **Alabama:** Alabama Computers, Huntsville (205) 837-9324 **Arkansas:** Jungkind Photo Graphic, Little Rock (501) 374-8305 **California:** Century Computer Systems, La Habra (310) 697-6977; Computer Guild, Mission Viejo (714) 951-1355; Computer Showcase, San Francisco (415) 563-1953; Creative Computers, Lawndale (310) 542-2292; Creative Computers, Santa Monica (310) 394-7779; Dataphile, Watsonville (408) 724-3322; HT Electronics, Sunnyvale (408) 737-0900; KJ Computers, Granada Hills (818) 366-9120; Transnational Electronics, Anaheim (714) 630-8711; Winners Circle, Berkeley (415) 845-4814 **Florida:** Amazing Computers, Tampa (813) 977-6511; Computer Video Associates, Pinellas Park (813) 576-5242; Computer Lane, Pembroke Pines (305) 435-1118; Computers Plus, Jacksonville (904) 268-2359; Computers Plus, Daytona Beach (904) 252-6442; Creative Equipment, Miami (305) 266-2800; Eagle Computers, W. Melbourne (407) 951-9732; New Age Electronics, Largo (813) 530-4561; **Georgia:** A.C.S., Norcross (404) 263-9190; **Indiana:** CPU Inc. Indianapolis, (317) 577-3677 **Kentucky:** Expert Services, Florence (606) 371-9690; Mr. Horan's Computer Lab, Louisville (502) 244-9595; **Maryland:** Buried Treasure, Rockville (301) 770-6778; Professional Micro Services, Baltimore (301) 366-0010; Software Advantage, Rockville (301) 424-3024 **Michigan:** Computer Link, Garden City (313) 522 6005; Slipped Disk, Madison Heights (313) 546-3475; **Nebraska:** Double E Computers, Omaha (402) 334-7870 **New Hampshire:** Digital Connections, Dover (603) 742-2233 **New Jersey**: Golden Hedge, Cherry Hill (609) 354-1500 **New York:** Digital Dimensions, New York (212) 727-3290; Microworks, Buffalo (716) 873-1856 **Oregon**: Clackamas Computers, Clackamas (503) 650-0701; **Pennsylvania:** Mega Bytes, Pittsburg (412) 653-9050; **South Carolina**: Computer Port, Spartanburg (803) 574-9679; **Texas**: Computer-Ease, Corpus Christi (512) 882-2275; Metropolitan Computers, Dallas (214) 702-9119; Microsearch, Houston (713) 988-2818; The Station, Austin (512) 459-5440; **Washington:** Nybbles & Bytes, Tacoma (206) 475-5938; Omni International Trading, Seattle (206) 620-2925; Spectral Electronics, Bellvue (206) 644-4038

***CANADA:* Alberta**: A Plus Computers, Edmonton, (403) 448-0632; Desktop Computing, Red Deer (403) 342-4444; Software Supermart, Edmonton (403) 425-0691; The Computer Shop of Calgary (403) 243-4356; **British Columbia**: Conti Computers, Vancouver (604) 734-0606; Wizard Computers, Vancouver (604) 321-7144; **Manitoba:** Adventure Software, Winnepeg (204) 942-4752; **Ontario:** Amsoft, Scarbarough (416) 431-9452; Computer Variables, Richmond Hill (416) 771-6807; Comspec, Toronto (416) 633-5605; Electronics 2001, Willowdale (416) 223-8400; Leppert Business Systems, Hamilton (416) 522-9029; Lynx Technical Services, Orleans (613) 830-8396; Lynx Technical Services, Ottawa (613) 237-4701; Neutron Computers, Kitchener (519) 742-9821; Obys Amiga Computing, Sudbury (705) 673-8520; **Quebec:** Software House, Montreal (514) 374-3614; Soft Wares, Montreal (514) 737-5865 **Sasketchewan**: Computer Answers, Prince Albert (306) 764-2983 Memory Lane Computers, Saskatoon (306) 242-4000



A2000
A3000
A4000

ROCKET SCIENCE MADE SIMPLE

...HIGH FLIER VERSUS "SOME ASSEMBLY REQUIRED"

With some 24 bit video boards you pay your money and take your chances. Chances that they'll be up and flying in the future. Chances that all the "enhancements" they promised will be around tomorrow.

Let's be fair. Where do things stand *today*?

iV24 VERSION 2.0

	IV24™	OpalVision™
Integrated video genlock	✔	○
1.5MB 24-bit, 16.8 M color frame buffer	✔	✔
Real-time framegrabber/digitizer	✔	○
De-interlaced video flicker eliminator	✔	○
VIU-S™ with RGB, composite, S-VHS input/outputs	✔	○
Optional VIU-CT™ pro-grade component transcoder (Betacam, M-II compatible) input/outputs	✔	○
2-way moveable, sizeable PIP (picture in picture) display, (video over application or application over video)	✔	○
Digital and analog key inputs	✔	○
Captured image retouching/processing	✔	○
Video switcher transitions	✔	○
Real-time 24 bit paint	✔	✔
Titling/character generation	✔	○
Animation/3-D rendering	✔	○
Karate game	○	✔

The VIU Advantage:

From the very beginning we figured that people who purchase a serious video card want much more than fun and games. GVP is serious about video! So **IV24's Video Interface Unit** gives you more choices for inputting and outputting video signals than any other Amiga® peripheral on the market. Period. Nobody else gives you a VIU splitter, let alone one that integrates video from computer sources, component tape formats, composite video, even broadcast professional formats—in any combination you can imagine. GVP also offers an international (PAL) standard IV24.

Software Brigade

Desktop Darkroom™ • Capture images in Desktop Darkroom or bring stills in from other applications for professional processing and retouching, using filters, special effects and color separation.

MyLAD™ • Hot-switch between 2 video sources with 50 packaged video transitions for live action production studio effects.

Macropaint-IV24™ 2.0 • (New release—Significantly enhanced!) Paint 24 bit graphics from a stunning palette of 16.8 million colors. Then key video over graphics or graphics over video. Access ARexx scripts directly.

Caligari24™ • IV24's newest software bonus is a complete 3-D modeling/animation/rendering package. Desktop animation's future—on your Amiga today.

In a showdown of 24 bit video boards, IV24 rules the pack. So how will you spend your video future—airborne at full thrusters...or grounded, waiting for parts?

For more information or your nearest GVP dealer phone 215·337·8770
For technical information, phone 215-354-9495

GVP

GREAT VALLEY PRODUCTS, INC.•600 CLARK AVENUE, KING OF PRUSSIA, PA 19406 USA
PHONE 215·337·8770 • FAX 215·337·9922

Circle 25 on Reader Service card.

CONTENTS

VOLUME 9, NUMBER 5, MAY 1993



You could think of those corny but wonderful werewolf transformations in Hollywood horror classics as the state of the art in image manipulation during the '40s and '50s. But Amiga image-processing software in the '90s has taken the art to a state of sophistication unimaginable even a few years ago: From melt-downs to morphs and water-drops to warps—the dazzling impact and sheer variety of special effects is mind-boggling. So get ready for a special slant on Amiga graphics this month as we take a guided tour of image-processing programs and techniques!

FEATURES

ARTICLES

COLUMNS

DEPARTMENTS

REVIEWS

GAMES

COVER IMAGE BY R. MORRISS, NOODLE RANCH, 1993
COVER PHOTOGRAPH: ORIGINAL COURTESY OF BETTMAN ARCHIVE

AmigaWorld

Dale Strang, *Publisher*

Dennis Brisson, *Editor-in-Chief*
Daniel Sullivan, *Executive Editor*
Vinoy Laughner, *Managing Editor*
Barbara Gefvert, *Senior Editor*
Tim Walsh, *Senior Editor/Reviews*
Ann Record, *Assistant Editor*

Gene Brawn, David T. McClellan, Joel Hagen, Peter Olafson, *Contributing Editors*

Howard G. Happ, *Art Director*
Laura Johnson, *Assistant Art Director*
Ann Dillon, *Designer*
Alana Korda, *Manufacturing Manager*

Michael McGoldrick, *Advertising Director*
Barbara Hoy, *Sales Representative*
Heather Guinard, *Sales Representative*
Meredith Bickford, *Advertising Coordinator*
Advertising: *1-800-441-4403; 1-603-924-0100*
FAX: 1-603-924-4066

Giorgio Saluti, *Associate Publisher, West Coast Sales*
533 Airport Blvd., Fourth Floor, Burlingame, CA 94010
1-415-375-7018; FAX: 1-415-375-7019

Wendie Haines Marro, *Marketing Director*
Mary McCole, *Promotion Coordinator*
Lisa Jaillet, *Desktop Publishing Manager*

Deborah M. Walsh, *Circulation Manager*
Subscription Services: 1-800-827-0877 or 1-815-734-1109

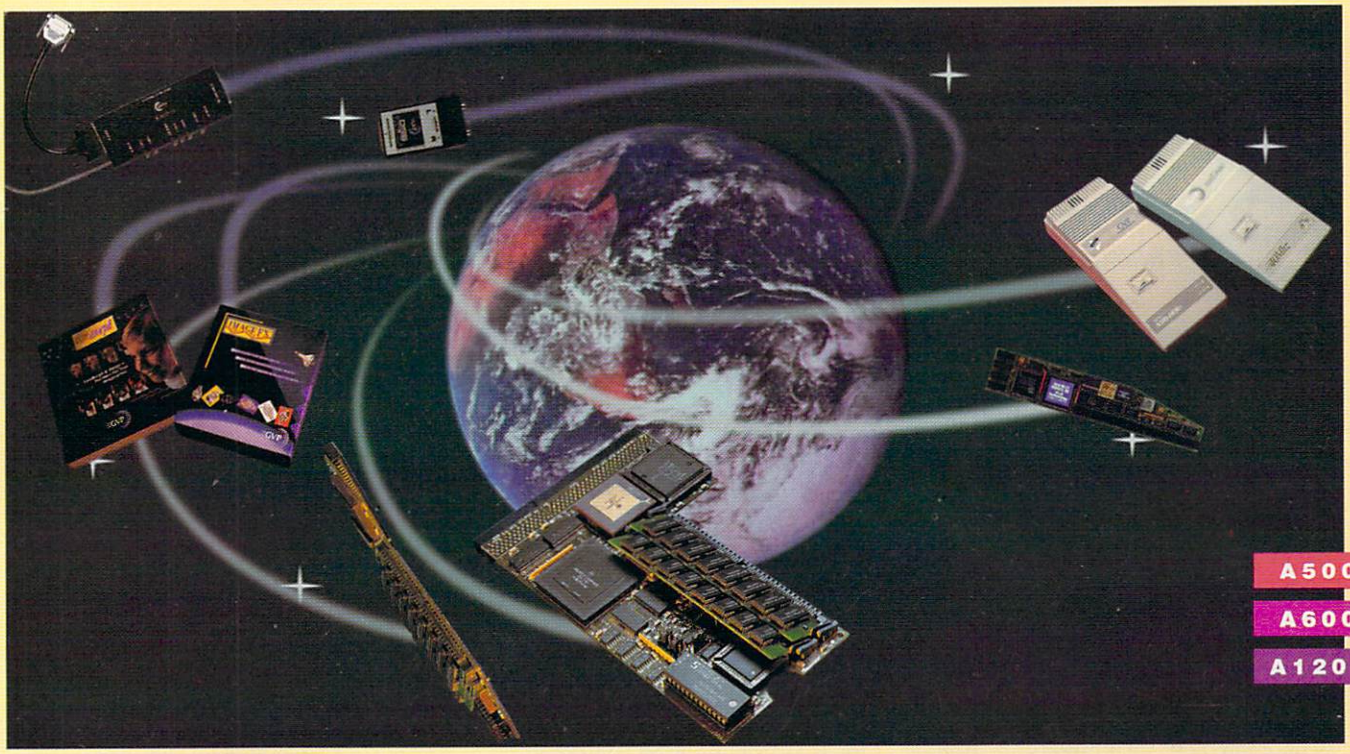
TechMedia Publishing

Dale Strang, *President*
Susan M. Hanshaw, *Director of Operations*
Monica Lougee, *Administrative Assistant; Customer Service Liaison*
William M. Boyer, *Director of Credit Sales & Collections*
Kemco Publishers Services, *Newsstand Circulation*

IDG
INTERNATIONAL DATA GROUP

AmigaWorld (ISSN 0883-2390) is an independent journal not connected with Commodore Business Machines, Inc. *AmigaWorld* is published monthly by TechMedia Publishing, Inc., an IDG Company, 80 Elm St., Peterborough, NH 03458. U.S. subscription rate is $29.97, one year; $57.97, two years; $83.97, three years; Canada, $41.97 (includes GST), and Mexico $38.97. Foreign Surface $49.97. Foreign Airmail $84.97. U.S. funds drawn on U.S. bank. Prepayment is required on all foreign subscriptions. All foreign rates are one-year only. Second-class postage paid at Peterborough, NH, and at additional mailing offices. Phone: 603-924-0100.

Postmaster: Send address changes to *AmigaWorld*, Subscription Services, PO Box 595, Mt. Morris, IL 61054-7901. Nationally distributed by Kable News Co. *AmigaWorld* makes every effort to ensure the accuracy of articles, listings, and diagrams published in the magazine. *AmigaWorld* assumes no responsibility for damages due to errors or omissions. Printed in the USA.



EXPAND YOUR HORIZONS

With the world's largest family of GVP productivity-enhancing peripherals for Amiga® 500, 600 and 1200 computers

A1230 TURBO+™
A1200 SCSI/RAM+™
A530 Turbo™
A500-HD8+™
GVP/PC286™
DSS8™
CineMorph™
ImageFX™

INTRODUCING The A1200 SCSI/RAM+™ and A1230 TURBO+™

Take full advantage of the Amiga 1200 with these powerful new additions to the GVP line.

A1230 TURBO+

Stepped-up payload—down-to-earth price

- 40MHz 68EC030 processor.
- 1MB 32-bit 60ns RAM, incrementally expandable to 32MB.
- FPU socket for optional 40 MHz math coprocessor (for intensive floating-point operations like animation).
- GVP's exclusive Kickstart Remapping Technology copies Kickstart ROM into Fast RAM for accelerated performance.
- Fits in "trap-door" slot for easy installation. Maintains A1200 warranty.

A1200 SCSI\RAM+

Economical SCSI workstation versatility

- Includes high-speed DMA SCSI Hard Disk Controller. Attach up to 7 other external SCSI peripherals.
- 1MB standard with onboard 32-bit, 60ns, 0 wait-state RAM expansion, (expandable to 8MB).
- FPU socket for optional math coprocessor.

A530 Turbo™

Turbo-charged A500 Enhancer

- *Amiga World* called it "the best A500 Expansion Box ever." Turbo's 68EC030 40MHz CPU powers your most intensive applications more than 10 times faster, for A3000-surpassing performance.
- High-speed DMA SCSI hard disk controller with internal hard disk.
- Access up to 8MB of 32-bit RAM.
- Unique mini-slot for further expandability
- Instant expandability for up to 7 SCSI devices
- 68882 FPU socket.

A500-HD8+™

Classic A500 Enhancer

- Value-packed with many A530-Turbo features.
- Up to 8MB fast RAM expansion.
- High-speed DMA SCSI hard disk controller with internal hard disk.
- Instant expandability for up to 7 SCSI devices.
- Unique mini-slot for further expandability.

GVP/PC286™

A500 PC/286 Emulator

- Fits in the mini-slot of the A530 Turbo or A500HD8+ to emulate a "286-16" PC. MS-DOS/Windows compatible.
- 512K dedicated PC memory + Amiga memory sharing, CGA-VGA mono display emulation, 80C287 FPU socket.

Great values for the entire Amiga line

G-Lock™

- The industry's most versatile and well-engineered genlock board for professional titling and graphic applications.
- Powerful, intuitive software interfaces.
- Video and audio special effects.

DSS8™

- Record, edit and compose digital audio samples in real time for multimedia audio mixes.
- MIDI-in capability with direct interface between sequencer and editor.
- Graphic editing and composition of wave forms.
- Dozens of effects and features make this the most comprehensive 8-bit Amiga digital audio device.

CineMorph™

Morphing Special Effects Software

- Powerful enough for professional morph results, but easy enough for novice use.
- Generate "composites," aging or missing person simulations.
- Integrated, Amiga-style interface compatible with any Amiga, DCTV™ or HAM-E™ system.

ImageFX™

Image Compositing Software

- Digital retouching with the most complete set of filters, color gradients, image distortions, masks, and text handling tools on the market.
- Converts your Amiga into an image prepress/color correction system with CMYK, RGB, HSV, and YUV.
- Scan in or framegrab from virtually any image capturing device.
- Includes CineMorph features, at no extra charge.

When it comes to a sheer range of innovative products, uncompromising excellence and comprehensive customer support—one company consistently outperforms the rest. World-class performance—it's what you expect from the world's #1 Amiga peripherals company.

For more information or your nearest GVP dealer phone 215·337·8770
For technical information, phone 215·354·9495

GVP

GREAT VALLEY PRODUCTS, INC.•600 CLARK AVENUE, KING OF PRUSSIA, PA 19406 USA
PHONE 215·337·8770 • FAX 215·337·9922

Circle 1 on Reader Service card.

EDITOR'S DRAWER

Some expert advice for budding computer artists who seek to enhance their Amiga interests and talents.

Educating Amiga Artists

HOW DO YOU become a successful computer graphics artist? It's a question on the minds of many *AmigaWorld* readers considering an education and career in computer art and animation. More than a few interested readers have asked me which courses of study and which schools are best, what careers are available, and how to go about securing a position in the computer art field.

Lacking answers, I turned to the experts—successful professionals who use the Amiga—who provided useful insights and valuable advice.

Recommended Study

Many schools offer a variety of high-quality computer programs, as well as degrees in computer visual arts, for aspiring computer artists.

It wasn't always the case. Bruce Elliott, art dept. head at Germantown Academy (Fort Washington, PA), notes that when he started using his Amiga—six years ago—"it was impossible to find college programs that offered a sound foundation of courses for the computer artist or art teacher. All I could do at that time was teach myself..."

Many college programs now exist that teach basic drawing, painting and design, as well as computing applications, computer graphics and animation, and video/TV production. This is due, in part, to an increased realization of the computer's role as a critical tool for image creation and manipulation.

The experts I contacted unanimously recommended that college students become well-grounded in traditional art skills and design basics, as well as general computer ability. "Get a solid foundation in traditional art skills while you pursue computers as a medium," suggests Joel Hagen, *AW's* long-standing graphics columnist and college arts and animation instructor in California.

But also, it is important to develop other skills—from basic math and science to creative writing to drafting—that could be applied to your career. An interdisciplinary approach, allowing you to combine your study of computer graphics with other courses, is best.

Phil Fitzpatrick, associate professor of art at Lamar University (Beaumont, TX), advises, "Take a broad base of subjects; [don't] focus entirely on computers or computer graphics." He recommends complementing your study of computer art with "courses that teach thinking, creativity, and communications, which are fundamental to any type of visual imaging or communications."

In the world of computer art, it's best to maintain an open and creative mind and be prepared for anything, warns Fitzpatrick. "People will ask you to do the strangest sorts of things and assume that you know how!"

Rick Manasa, who serves as an Amiga consultant in audio-video and educational applications in Michigan, proposes that artists also develop some business, accounting, and communication skills. "All people in graphics and animation need good communication skills to be able to translate producer and client desires into reality."

Which System to Buy?

It should come as no surprise that the folks I queried overwhelmingly cited the Amiga as the most affordable, and easiest computer to use for animation and desktop video. In addition, however, students should become familiar with other platforms (e.g., PCs, Macs, and Silicon Graphics workstations).

Each platform has its merits. Jeff James, a student at Colorado State University (Fort Collins, CO), urges: "It never pays to criticize someone for his or her choice of computing machinery. Starting an argument with a potential employer over which computer is better is a sure way to be taken out of consideration for the job."

In the pursuit of a computer art degree, your focus should be on *art*, not computer, according to Michael Hanish, an instructor for the Arts Institute of Vermont. "The hard part... will be in figuring out what to do rather than how to do it. I strongly feel that form and technique must be a servant to content. Computers are tools with a purpose—whether it be aesthetic, educational, or practical."

Jobs

If you have the education and/or the experience, how will you parlay your skills into a job? There's no easy answer, but the experts agree that talented artists are in high demand in the traditional fields of film, advertising, publishing, and television, and these opportunities will continue to expand.

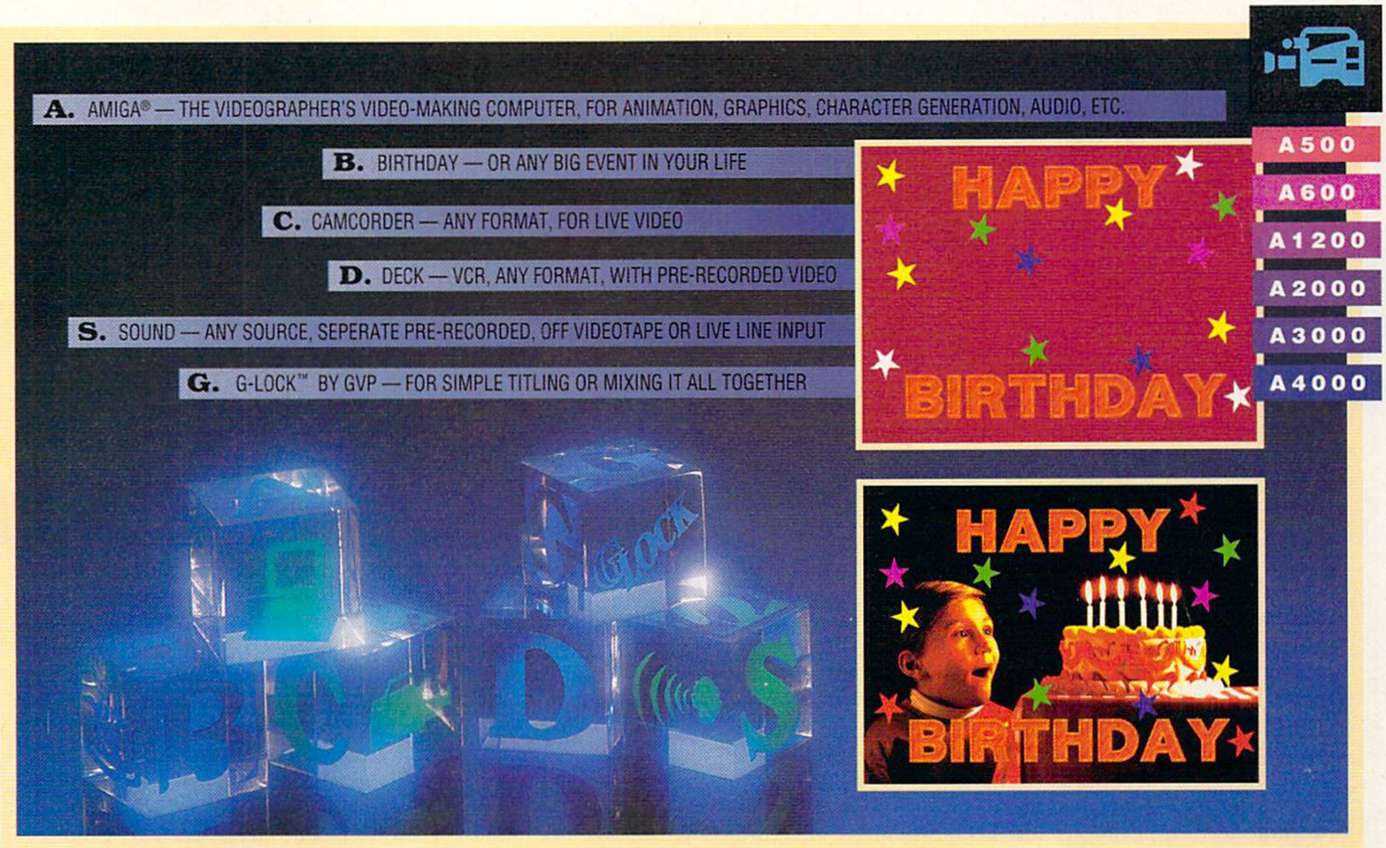
Designers are well-suited for CAD applications in drafting, architecture, industrial design, mechanical engineering, and textile design. Multimedia production for training, education, and business is also a growing field.

"Today, the opportunities are almost endless... from designing artwork for computer games to rendering special effects for sci-fi films. Many of the nation's largest traditional animation houses—such as Disney, whose latest film, *Aladdin,* features computer-generated imagery—are using increased amounts of computer animation in their productions," states Jeff James.

Ingenuity, timing and perseverance are key. Computer artists are needed in many fields, including advertising, communications, and education, but ultimately, as the computer animation market evolves, you could find yourself creating and defining your own position.

"There are new opportunities in areas that have only recently developed an acute awareness of the computer as an image-making device (e.g., law, medicine, education and industrial training services)," adds Fitzpatrick.

Continued on p. 92.



THE BUILDING BLOCKS OF BETTER VIDEO

G-Lock™ Makes Your Video Connections With:

• Genlock features for crisp overlays of scrolling, or static titles, graphics over live video and recording to videotape with high quality results.

• Simple, intuitive mouse-driven software control panels. Full ARexx, CLI interfaces and Workbench interfaces.

• Software selection of 2 composite video inputs or 1 Y/C (S-Video) input.

• Software selection or mixing of 2 audio inputs with bass and treble control.

• Software-driven video processing amplifier, (proc amp) offering complete real-time signal processing control, including hue, brightness, saturation and more.

• Software-controlled RGB color splitter compatible with video digitizers like Newtek's Digi-View™.

• Built-in transcoder converts input video to composite, Y/C, RGB or YUV outputs.

• Full ECS/AGA support for full compatibility with new A1200 and A4000 systems!

• Compatible with popular titling software like AmigaVision™, Scala-Multimedia 200™ and Gold Disk's Video Director™.

• Separate versions available for standards around the world. Compatible with NTSC, PAL and SECAM.

Video: A Cut Above



G-Lock's six video control panels enable you to perform a wide array of special effects on still or motion video including ...

- Colorizing for unique visual effects.
- Creating your own "classic" black and white videos using the Colorkill feature
- Color filter effects.
- High-quality keying effects with bitplane or chroma keying.
- Manual or automatic (ARexx triggered) fades and cuts.

Audio: Sound Designs

G-Lock's dual-input audio panel switches, mixes and shapes sound for effects such as ...

- Combining stereo channels or separate inputs without a "Y" adaptor.
- Treble and bass equalization.
- Plus, add DSS8 or any Amiga created/modified digital audio samples to your final mix!

Professional video processing + audio processing + a powerful but simple interface + creative special effects, make G-Lock the cornerstone of your multimedia productions!

For more information or your nearest GVP dealer phone 215·337·8770
For technical information, phone 215·354-9495

GVP

GREAT VALLEY PRODUCTS, INC.•600 CLARK AVENUE, KING OF PRUSSIA, PA 19406 USA
PHONE 215·337·8770 • FAX 215·337·9922

Circle 53 on Reader Service card.

OVERSCAN

News, New Products and Networks

Amiga Summit Takes World View

ORLANDO, FLORIDA—This year's Amiga Developers' Conference was the first to bring together Amiga programmers, engineers, and marketing reps from both sides of the Atlantic. Not surprisingly, the late-winter event was also the largest DevCon to date. More than 400 industry insiders—from the US, Canada, and 11 European countries—gathered to attend seminars conducted by Commodore's Engineering, CATS (Commodore Applications and Technical Support), and Sales divisions.

Fueled by the recent release of the AGA-based A4000 and A1200, the mood was optimistic. The first of the 40 sessions outlined Commodore's technical development and marketing philosophies, directions, and strategies. The bulk, however, focused on specific issues such as digital-signal processing, retargettable graphics, and, yes, future chip sets. Although attendees are under nondisclosure concerning specifics, we can assure you that Commodore is planning big for the future of Amiga.

While the amount of material presented was immense—backed by 700 pages and four disks of documentation—attendees still found time for socializing and showing off. As always, the computer room was crowded well into the wee hours of the following morning on Developers' Showcase evening. The annual "I'll show you mine if you show me yours" session was further enlivened by a number of interesting European products, from graphics boards to shareware.

The five-day program was capped off by the 1992 Developers' Choice Awards Luncheon. Enthusiasm for the A4000 was clear here, as the machine itself picked up the Best Hardware award, and its AmigaDOS Release 3 operating system received Best User Interface honors. Other winners included SAS Institute's SAS/C6.0 (Best Professional Productivity Software), Electronic Arts' DeluxePaint IV (Best Consumer Productivity Software), Software Toolworks' Miracle Piano Teaching System (Best Education Software), and 21st Century Entertainment's Pinball Fantasies (Best Entertainment Software). Hardware designer Brad Carvey of NewTek had the crowd eating out of his hand after his thank-you speech following the Video Toaster's induction into the Amiga Hall of Fame.

—Linda Laflamme

"AW Right! " Said Fred

PETERBOROUGH, NH—Drivers, divers, doves, and dynamite. These are just some of the subjects depicted in **Amigamations**—the video containing the 20 winningest entries from *AmigaWorld's* Third Annual Animation Contest.

When 17 *AmigaWorld* and *Desktop Video World* staffers gathered to judge each of the 20 finalists in four areas (sound, graphics, storyline, and originality), fellow New Hampshirite Mark Thompson handily floated away with first place and a grand prize of over $12,000 in Amiga gear for his 4 1/2-month exercise in subtle 3-D rendering of ***One Stormy Night With Fred Floaty***. Resplendent in his LightWave 2.0-cured polymers, Fred, a cheap inflatable toy, experiences a daydream so exciting it nearly bursts his Latex lining.

Noted animator Dr. Eric Fleisher gave Fred tough competition with ***Commuter Chip***, the second-place winner. The good doctor's animation depicts a society in which 3-D computers reign supreme. See computer chips commute to work. See them master manufacturing processes. Will their efficiency improve their quality of life? Who cares? After all, they're just computer, er, commuter chips.



Fab Fred finishes first.

Bob Eaton captured third place honors with ***The Sculptor***, in which a strange 3-D creature begins sculpting with traditional manual tools but soon switches to high explosives. When the dust settles, a resulting sculpture bears the remarkable likeness of... could it be...?

Matt McDonald and Mark Miller pushed the envelope of technical and artistic innovation to claim fourth place with the 3-D epic ***Life***. (A still from this animation appeared on *AmigaWorld's* February cover.) Fifth place went to the Toronto-based duo Rob Currie and Phil Maeers for the politically-inspired ***Mouseland***, a 2-D dynamo.

Other animators whose work appears on the tape are Dennis Schaeffer, Tony Goskie, Randy Wall, Bo Feng, David Smalley, Dan Wilcox, Dan Ritchie, Alan Price, Tracy Sabin, Jun Whang, Otto von Ruggins, Dave Woodard, and Chuck Wardin

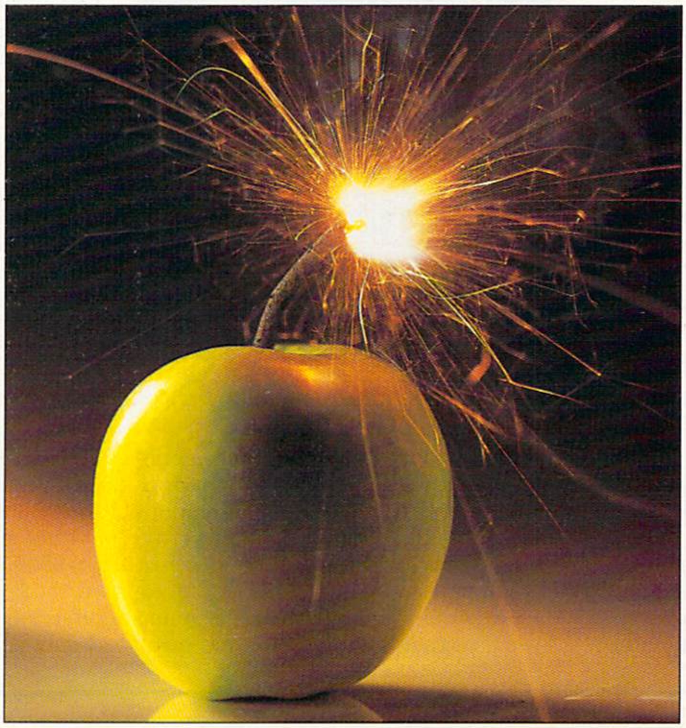
Choosing the winner was far from easy, as all the pieces are strictly top-notch. And choosing the "Top 20" among the hundreds of entries was no easier. This contest gave *AmigaWorld* the chance to witness first hand how creative and technically excellent Amiga animation has become. Thanks to all who participated.

—Tim Walsh

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 92.

SCALA

Everybody's talking multimedia revolution. Allow us to light the fuse.



A lot of apples were bruised when we first introduced Scala, the professional presentation package. With the new Scala MultiMedia MM200, they will be blown into oblivion!

Let us introduce a few of the features that make Scala MM200 combined with the Amiga the world's most powerful multimedia environment:

Scala EX
A revolutionary new plug & play system, for the integration of laserdisk, still video, MIDI, or CDTV sound in your Scala presentation. Extra EX'es, such as 24 bit graphic support and VCR control are also available.

Scala Wipes
More than 80 amazing, smooth and professional transitions provide possibilities previously unseen on the Amiga.

Scala Sound
Enhance your presentations with voice-over, music and special sound effects! Scala offers total control of recording and play-back.

Scala Shuffler
Instant viewing of your whole presentation! You can see up to 112 pages at one time. Simply shuffle them around with the mouse!

Scala Snapload
A series of advanced techniques make Scala load and display pictures and animations faster than any other package!

Scala Buttons
Creating interactive hotspots has never been so easy! Scala MM200 even includes full support of variables.

Scala LINGUA
The multimedia language Lingua with its close link to ARexx puts the advanced user in total control!

AnimLab
With this bonus program you can make your animations play up to four times faster!

The press writes:
"The word multimedia has been battered and misused... Scala on the other hand, know exactly what multimedia is and what to do with it!" *Amiga User International (UK)*

"...the best program in show business." *Amiga Format (UK)*

"Scala MM200 is the kind of software that many serious users simply can't afford to be without." *Amiga Computing (UK)*

Scala MM200
— for video titling, training, business presentations, interactive use — or any multimedia combination.



For a close look at the market leader in multimedia software, contact your dealer today!



The Scala main menu.



Scroll text by Scala.



The Scala edit menu.



It's a Scala world!



The Scala Shuffler.

The SCALA group:
Oslo, Copenhagen, London, Amsterdam, Stockholm, Washington DC.

SCALA Inc.
12110 Sunset Hills Rd., Suite 100
Reston, VA 22090, USA
Tel: (703) 709-8043
Fax: (703) 709-8242

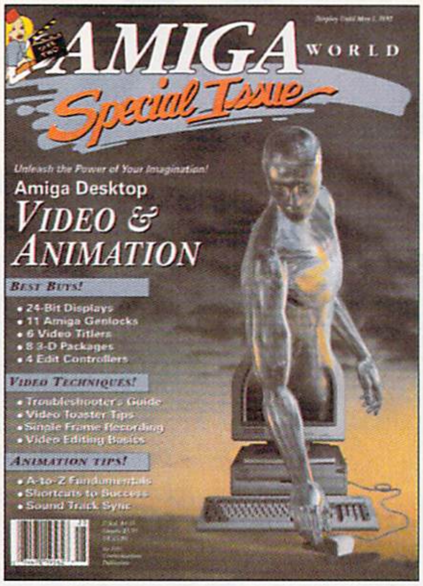
SCALA
Why make it harder?

Circle 60 on Reader Service card.

Amiga Graphic Garners Gold

Magazine and Bookseller magazine recently awarded *AmigaWorld's* 1992 Special Issue first place in the Computer Magazine category of its annual cover competition. Created entirely on the Amiga using products from Impulse and ASDG, Tim Wilson's 3-D image wowed judges and outplaced *PC Computing* and *PC World* magazines, which took second and third places, respectively.

The cover image represents the talents of many folks. Congratulations are due not only to Mr. Wilson for the stunning rendering, but also to Howard Happ for his excellent art direction, Lou Wallace for technical assistance, and finally to Roger Goode, the person who captured our imaginations with his *Terminator 2*-inspired concept.



Silver man takes the Gold award.

Here's Your Change

If **A-Talk** is the program you use to speak up on line, you should know that developer ***Felsina Software*** has retaken its telecommunications package from New Horizons Software, which previously sold and marketed it. To talk turkey about A-Talk in the future, contact Felsina directly. (RS# 126.)

Even if you can't stand modern art, you may like the most modern **Art Expressions** ($249, ***Soft-Logik***). Release 1.02 improves many features of the original release. Soft-Logik has rewritten its Preferences printing routines (which were a problem in the first release), and has polished Adobe Illustrator and IFF 2R2D support. If you haven't sent in your registration card yet, do so now; Soft-Logik will send registered owners not only the update disk but also font and clip-art disks. (RS# 127.)

A Handful of Color

While there's no shortage of monochrome hand scanners on the market these days, ***Migraph*** is the first to put color scanning in the palms of Amiga users. Using the same four-inch wide scanning head of other hand-helds, the **CS-6000** recognizes and scans up to 262,144 colors in five color modes (super color, 4096-color, gray-scale, monochrome dither halftone, and monochrome line art/text), at six resolutions from 50–400 dots per inch. It offers true gray-scale scanning with 64 gray levels at 200 dpi.

Features include a stop/start scanning switch and adjustable brightness control. The unit works with Workbench 1.3 and up, and supports the AGA chips of the A1200 and A4000.

Until April 30, you can purchase the CS-6000 direct from Migraph (suggested retail price is $549) for $399. This offer includes free software upgrades through June 30. (RS# 125.)

ON-LINE SCAN

By Tim Walsh

Reader Michael Hache recently expressed concern about the focus of this column, which was originally conceived to list freely distributable Amiga software. Rest assured that you will see more of popular Amiga PD files—with pauses for effect. After one such pause this issue, I'll hit the bricks next month with new-file news.

While this column discusses various on-line offerings, it rarely mentions my primary use of the nets: e-mail.

AmigaWorld relies on e-mail not only for transferring manuscript and image files, but also for monitoring the pulse of the Amiga community and, perhaps most importantly, for getting reader feedback.

We editors tap into all the major networks that attract Amiga users. You can reach us on GEnie, CompuServe, Portal, and BIX—either individually or by way of *AmigaWorld* areas.

BIX has reserved an area in our name (number 12 on the Amiga.Exchange menu) for a couple of years. You can also contact me directly through BIX via my handle twalsh@BIX.com or simply twalsh.

AmigaWorld maintains an area on Portal as well. After logging on, just enter: "GO AMIGA;3;1." You'll see our area is broken down into smaller subsections, each with its own heading. My own Usenet address through Portal is timwalsh@cup.portal.com.

While the editors occasionally post messages in these areas to solicit feedback, we mainly scan for messages and respond to them. Feel free to use these forums to tell us what you like or don't like about *AmigaWorld*, and to let us know which issues and products you'd like to see us cover. Any message you post will make the office airwaves, and may well prompt discussion among other readers.

While *AmigaWorld* has no designated area on either CompuServe or GEnie, you're apt to bump into one of us on those nets, too. To e-mail me on CompuServe, use the account number 76376,2137. With reservations about breaking all e-mail delivery records, my address on GEnie is t.walsh9.

So, the next time you're on line, be sure to direct your questions, comments, and messages to us. We'd sure like to hear from you!

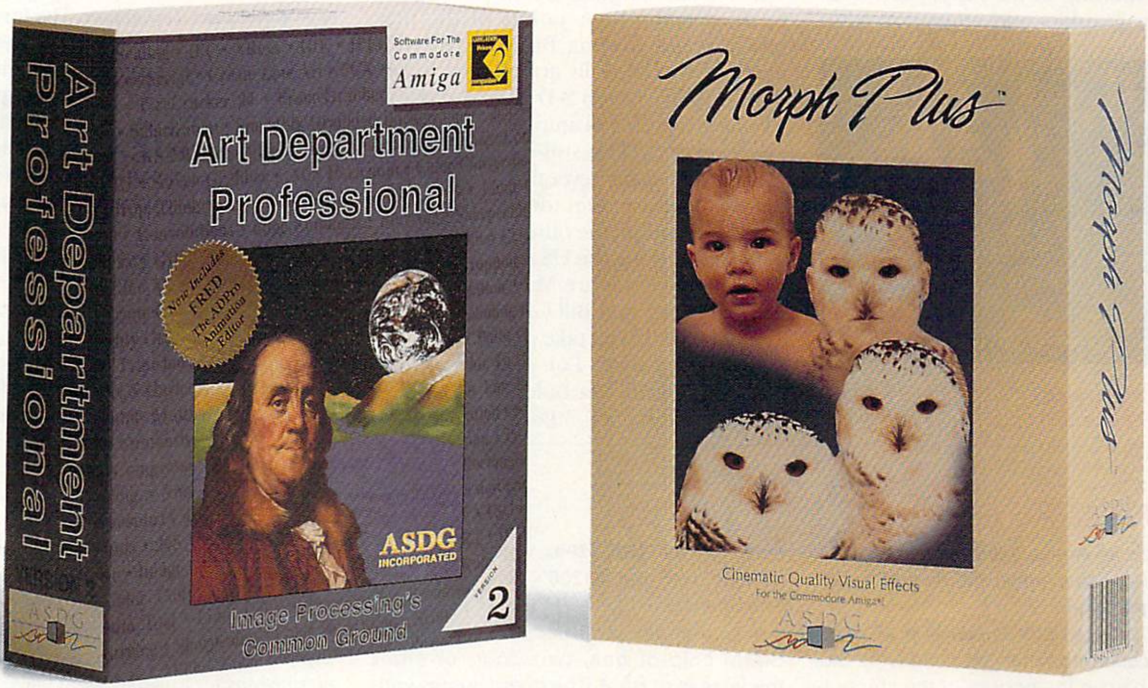
BIX
800/695-4882
617/354-4137/

CompuServe
614/457-0802
800/848-8199

GEnie
800/638-9636

Portal Communication Company
408/973-9111 □

Bring Home The Best





If you're thinking about getting an Amiga® special effects or image processing product, here are some facts to consider:

• ASDG's Art Department Professional was named the "Best Image Processing Program" for 1992 by the readers of Amazing Computing Magazine and "Best Video Software" by Germany's Amiga Plus Magazine.

• American Software And Hardware Distributors and MicroPace Distributors (the two largest Amiga® software distributors in North America) cite ADPro and MorphPlus as the best selling products of their kind.

• ADPro placed third among ALL Amiga® software products on the MicroPace 1992 Top 50 Sellers List.

• The Post Group, one of the largest post production houses in the world, has used ADPro and MorphPlus in the production of special effects for the prime time TV show Quantum Leap and for major motion pictures.

• Mark Swain, an AmigaWorld reviewer (and animator for Foundation Imaging, the creators of the special effects for Babylon 5), said, "MorphPlus produces the most realistic shape shifting special effects I have ever seen on a desktop."

• David Duberman, Executive Editor of Video Toaster User, said in a comparative review of Amiga® morphing products, "MorphPlus is the Rolls Royce of Amiga® morphing software... it will pay for itself with one job."

Consider the facts.
Then bring home the best.

ASDG

925 Stewart Street Madison, WI 53713
608/273-6585

Circle 39 on Reader Service card.

Ciao, Amiga!

Amiga artists have always made an impressive showing in the Italian BitMovie computer graphics and animation competitions. The latest was no exception. While Italian-language fluency is required to discern the finer points of the new brochure announcing BitMovie '92 winners, no special skills are needed to see that 17 of the 18 top 2-D animations and 21 of the top 25 3-D animations are Amiga generated. The still-image category winners list spans several pages, but just one of those listed on the first two pages is a Mac creation; the other nine are Amiga works. Among the US Amiga artists on the winners roster are Mary McJohnson, Eric Schwartz, and Bill Graham.



Antonio De Lorenzo's 3-D work won the hearts of BitMovie '92 judges.

BitMovie '93 will take place April 8-12 in Riccione, Italy. For details, contact Carlo Mainardi, Via Bologna 13, 47036 Riccione, Italy; fax: 39/0541-601962.

A1200 or Bust

Where's an Amiga 1200 owner to go for machine-specific information and products? Right here!

GVP's new **A1230 Turbo** is a 40 MHz 68030 accelerator that fits inside the expansion bay on the bottom of the computer. Two SIMM sockets allow you to add RAM to suit your needs: Use 4MB SIMMs for up to 8MB of 32-bit wide 60ns DRAM, or use 16MB chips for up to 32MB. A Floating Point Unit (FPU) socket lets you add a coprocessor to speed math-intensive operations. Populated with 1MB RAM, the board sells for $499. (RS# 132.)

MicroBotics offers some of the same options with its **MBX 1200z**, which installs internally onto the A1200's bus connector. The board provides an FPU and a real-time clock/calendar, and accepts one 32-bit SIMM chip of one, two, four, or eight megabytes of RAM. The board comes with diagnostic software and costs $189 without memory. (RS# 133.)

Beginners might benefit from the **A1200 Insider Guide**, which goes for £14.95 from British publisher ***Bruce Smith Books*** (ISBN 1-873308-15-9). In 24 chapters, the book touches on Workbench 3.0, utilities, Preferences, and AmigaDOS via tutorials. (RS# 134.)

Improving Toaster Character

"Your Toaster will never be the same!" says ***Innovision Technology***. The firm's new **Montage** ($499.95) promises professional-quality text display, DVE transition sequencing, and 16-million color graphics output—plus the ability to integrate smoothly into the Toaster environment.

Innovative character-generation is at the heart of Montage. The program's typefaces offer real-time click-and-drag font scaling, and high-level antialiasing for an effective one-nanosecond resolution. Montage's eight master character sets include symbols and international characters, and for increased flexibility, the program loads Toaster, Chroma, and Amiga font formats.

Montage also imports and exports image files in IFF and framestore formats, and its ability to display 24-bit graphics on the Toaster's framebuffers allows for such applications as compositing multiple images with variable translucency blending. The program can generate full-color gradient spreads, instant beveled boxes, and embossed wallpaper patterns. Its sequencing capabilities let you automate Toaster Switcher functions for multiple event playback, and you can apply any Toaster DVE to Montage titles, framestores, or video sources.

Montage can calculate directly in D2 framestore format for improved signal quality and display speed. What's more, its drivers can improve the quality of the Toaster encoder's video output, and an optional NTSC can reduce dot crawl and ringing artifacts. (RS# 128.)



OVERHEARD

It's time for spring cleaning in West Chester, and ***Commodore*** hopes to move products out of its warehouse by polishing prices on several pre-AGA products. The largest savings are available on the most powerful machines; you can save over $3000, for instance, on an A3000 Tower with a 68040 processor, 200MB hard drive, and 5MB RAM. That model, A3000T-40/200, is now $2875; other A3000s sell at significant savings, too. At the other end of the scale, an A2000 bundled with a 1084S monitor is now $1299 (a $240 savings), and CDTV carries a suggested price of $599 (a $400 cut). Likewise, CBM has trimmed the ticket on its A2630/4 68030 accelerator board from $1799 to $1299. (RS# 124.)

Mark Your Calendar!

Take a peek at the latest in Amiga technology! Here's the most recent listing of shows for the upcoming months. For information on registration, conferences, seminars, and workshops please call the number provided.

NCGA '93
April 27–29
Philadelphia Civic Center
Philadelphia, PA
800/225-6242

AMIJAM '93
May 14-15
Southern Alberta Institute of Technology
Calgary, Alberta, Canada
403/270-0270

Image World Dallas
July 13–15
Infomart
Dallas, TX
800/800-5474

More Control

German developer ***Phase 5 Digital Products*** wants to send your files careening through your data bus with its **Fast-Lane Z3** DMA hard-drive controller. The board's 32-bit Zorro-3 interface allows it to work with both the A3000 and A4000. Employing the new SCSI-II standard to speed data transfer, it represents a real alternative to the A4000's integrated IDE controller.

Besides hard-drive control, the board offers memory-expansion options—up to 64MB—with 32-bit wide autoconfiguration. (RS# 129.)

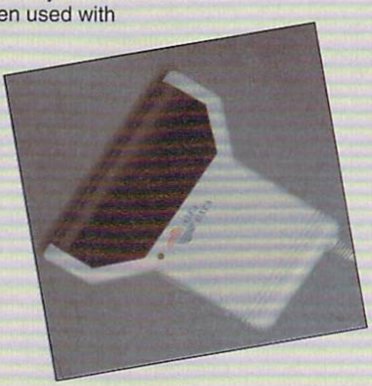
AlfaScan and AlfaScan-Plus

400 DPI Hand Scanner
256 Grayscale
Conversion Software

Regular version includes New Scan&Save Plus V1.76-V.
Plus version includes Touch Up V3.07-V.

Both models include:
- Merge It V1.4
- Alfascale scanning conversion scale
- Cartridge, Interface and Power Adaptor

Desktop Publishers and Video Professionals can produce 24 bit IFF and TIFF 256 Grayscale files with the included software. When used with products like Pixel 3D Professional from Axiom Software, generating high tech 3D logos from printed materials becomes easy, productive and profitable.



AlfaPower

External IDE Hard Drive and 8 MegaByte Ram Expansion for your Amiga 500

- Solid metal case
- RAM expandable to 2, 4, 6 or 8MB
- Holds one 3.5" or two 2.5" HD(s)
- Includes all cables, screws and software
- Autoboot, autoconfig and zero wait states
- Separate HD and RAM disable switches



Pre-configured systems with hard drive and ram installed are available. Plug an AlfaPower into your Amiga 500's expansion port and increase your performance and power in just minutes.

&

TKB-MT-AC

3 Button Crystal Trackball for any model of Amiga Computer

- Top quality construction with opto-mechanical encoder
- Two-color shining Crystal Ball
- Auto-fire button & key-lock function switch
- Long 6+ foot cord for convenient placement



If you are looking for a productive alternative to standard mouse input, an Alfadata trackball is the answer to your needs. Effortless finger-tip operation and reliable micro-switch buttons.

Product	Description	MSRP
AlfaRAM-0	External A500 8MB Ram Expansion, expandable to 2, 4, 6 or 8MB - chassis is similar to AlfaPower (above)	$149.95
AlfaRAM600-2	2MB AlfaRAM600 PCMCIA card provides 2 MegaBytes Fast Ram for Amiga 1200 or 600	$199.95
AlfaRAM600-4	4MB AlfaRAM600 PCMCIA card provides 4 MegaBytes Fast Ram for Amiga 1200 or 600	$349.95
FDD-M312	External 3.5" 880K Floppy Drive with pass-through drive connector and on/off switch for all Amigas	$139.95
RA2-8M-0	Low cost 8 MegaByte RAM expansion card for the A2000, expandable to 2, 4, 6 or 8MB - 0K installed	$149.95
RA5-4M-0	Amiga 500 4 MegaByte RAM expansion card includes set-up, RAM test software and on/off switch cable	$139.95
RA5-512K	Amiga 500 512K RAM expansion module (501-style) with Real Time Clock and on/off switch cable	$69.95
RA6-1M	Amiga 600 1 MegaByte RAM expansion device with Real Time Clock and Memory Enable Link	$99.95
SWB-M-BT	Floppy drive boot selector for Amiga 500 or 2000 - boot from drive(s) other than DF0:	$39.95
SWB-M-KS+	Auto Kickstart Switch Plus for Amiga 500 or 2000 - allows convenient switching between 1.3 and 2.0 ROMs	$39.95
SWB-M-KS6	Amiga 600 Auto Kickstart Switch - allows users to easily switch back to 1.3 ROMs for extra compatibility	$49.95
AlfaOptic	3 Button 300 DPI Optical Mouse - comes with optical mouse pad - Note: 3rd button is active	$79.95
AlfaPen	3 Button Optical Pen with pad - allows comfortable Pen-style mouse input with high resolution accuracy	$99.95
CLM-MT	"High tech" infra-red 3 Button Cordless Mouse with receiver/charging stand, mouse pad and power supply	$99.95
OMM-MT	2 Button Mouse with mouse pad, holder and extra long cord - excellent replacement mouse for all Amigas	$59.95

When You Consider Your Choices. . .
Remember The Company That Has Them All.

ALFA DATA US
Post Office Box 6990
Champaign, IL 61821 USA
Tel: 1 217 356-1962
Fax: 1 217 356-1881

ALFA DATA®

For more information, contact your nearest dealer or call 1 217 356-1962
Technical Support Available
Dealer inquiries always welcome

Circle 191 on Reader Service card.

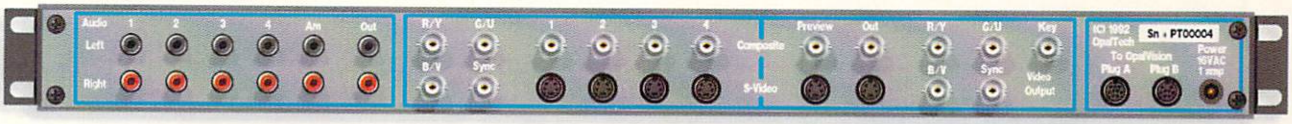
The OpalVision Video Suite

A power-packed video and audio mixing, switching, and transcoding device. This 19-inch, rack mountable unit is so advanced that it has its own internal computer and every aspect is software-controlled for precisely timed and accurate functionality. The Video Suite includes a wealth of inputs and outputs. There are 9 video and 10 audio inputs available, plus the 24-bit frame store. Professional quality video inputs and outputs are available simultaneously in RGB or Y/R-Y/B-Y, Composite and S-Video. Choose any 2 sources from these inputs, assign a transition or special effect, and then trigger it manually or automatically. All of the transitions and effects provided by the OpalVision Video Processor are available for use by the Video Suite.



A,B and Preview display LED

Audio Level VU meters



Audio Inputs | Sound F/X or 5th Audio input | Stereo output | RGB or Y/R-Y/B-Y inputs and master sync input | 4 Composite and 4 S-Video inputs | Preview composite and S-Video outputs | Main composite and S-Video outputs | Main RGB or Y/R-Y/B-Y and sync outputs | Key in/out | OpalVision input/ output | Power Connector

The linear transparency key (Alpha channel and transparency effects) can be taken from the Video Processor or an external video source, and/or output to another production switcher. This allows transparency control between 2 video sources on a pixel by pixel basis. The 10 Audio inputs (5 stereo pairs) are fully software sequenced with smooth fades and full, 5-band stereo frequency equalization.

Video Inputs:
(All available simultaneously)
- **4 composite inputs (8 composite inputs if S-Video inputs are used as composite)**
- **4 S-Video inputs (S-VHS, Hi-8 or Y/C)**
- **1 or 2 RGB or Y/R-Y/B-Y inputs (2nd source uses the 4 composite inputs)**
- **1 master sync input (master sync can be selected from any video source)**
- **1 infinite level linear transparency key**

Video Outputs:
- **1 composite main output**
- **1 S-Video main Output**
- **1 RGB or Y/R-Y/B-Y main output**
- **1 linear transparency key**
- **1 composite preview (automatically transcodes composite & S-Video)**
- **1 S-Video preview**

Audio:
- **Inputs: 10 mono or 5 stereo pairs**
- **Output: Stereo with 5-band equalizer and VU meters**

OpalVision Scan-Rate Convertor

Add this card to the OpalVision Main Board and achieve 31kHz, non-interlaced output of Amiga graphics, OpalVision images and any incoming source in either PAL or NTSC. And, we've added full time-base correction of incoming video. Time base correctors are used to synchronize two non-synchronized video signals, or for cleaning up the timing of a "dirty" video signal. The on-board memory also serves as a separate frame-store for dual framebuffer applications.

- **Converts interlaced PAL and NTSC to 31kHz non-interlaced, flicker-free display.**
- **Plugs into the OpalVision Main Board. No external power supply needed.**
- **Works with any multi-sync/multi-scan monitor.**

New Features:
- **Includes full, infinite window Time Base Correction**
- **Operates in RGB for superior quality**

Video Performance

Video Input Standards (User selectable)	NTSC, NTSC 4.4, PAL, SECAM
Video Output Standards	NTSC, NTSC 4.4, PAL
RGB output Bandwidth	>7 MHz
Composite (Luma) Bandwidth	4.5 MHz typical
S-Video Bandwidth	5.5 MHz typical
Hue Control	+30 to -30 degrees
Video lock jitter	<15ns
Horizontal position adjust	-320 to +1000 ns
Horizontal lock range	+/- 1200Hz typical
Subcarrier lock range	+/- 350Hz minimum
Linear Keyer input speed	>7 MHz

Audio Performance

Audio Inputs	10 inputs (5 left, 5 right) line level 20k ohms
Audio Outputs	2 outputs (Left, Right) line level 70 ohms
Input Mode	Differential for very low noise
Frequency Response	20Hz - >20kHz
Frequency Equalization points	59 Hz, 205 Hz, 790 Hz, 2.95 kHz, 12 kHz
Equalization Range	+/- 15db
Total Harmonic Distortion	0.05 % typical
Mixing level control	0 to -70db (independent software controlled DAC's)
VU meters	10 steps -20db to +3db range

Amiga 2000/ 3000/ 4000 Compatible

Manufactured and Distributed by:
Centaur Development
P.O. Box 4400
Redondo Beach, CA 90278

Created by:
Opal Tech
Sydney, Australia

For information:
1-800-621-2202
Phone: (310) 542-2226
FAX: (310) 542-9998
BBS: (310) 793-7142

Circle 162 on Reader Service card.

REVIE

Professional-level multimedia development package for Amiga and CDTV lines.

AmigaVision Professional

Commodore Business Machines, $399 ($99 upgrade for AmigaVision owners).

Hard-drive installable.
Not copy protected (freely-distributable player included).
2.0/3.0 compatible.
Accelerator compatible.
Minimum system: 2MB of RAM.
Recommended system: 4MB of RAM and hard drive.

I've used AmigaVision for many projects, and while it has its limitations, it is still a powerful tool for creating interactive multimedia. For professional-level development, where you need sophisticated capabilities such as a wide variety of math functions, database capability, and free-form buttons, "AV" is by far the easiest program for creating presentations. It is simply one of the most powerful multimedia development systems available anywhere. Now, Commodore has done one better: AmigaVision Professional solves most of the original version's shortcomings.

New and Improved

One of AV's biggest problems has been its lack of a distributable player. It has also needed an easy way to launch an AV script upon bootup—essential in kiosk applications. To launch a script, you've had to double-click on its icon. AV Pro solves these problems by including a distributable player that you can use to launch a script from a startup sequence or CLI. You also can launch the editor so that it comes up with a playing script.

Display capabilities have been greatly improved. Support for AGA graphics (A1200 and A4000 display modes of 256 colors and 256,000 color HAM mode) has been added, with some current limitations: You can't color-cycle or modify AGA images from within AmigaVision (such as changing the palette); and when using the Object Editor to create an object to place on an AGA picture, you can use only the first 32 colors in its palette. You can, however, place full-color brushes on them.

More picture transitions are now available—34 in all. The requester separates them into two groups: Half of them work with transitions between pictures with differing palettes and resolutions; the other half are for pictures that have identical palettes and resolutions. Not all transitions work well with AGA graphics, but plenty are available. The ability to call a random transition, which formerly required extra programming, is another welcome addition.

In interactive presentations, flexibility in the creation of buttons is very important. Even powerful programs such as Scala Multimedia 200 have limited button capability, and you are restricted to creating only rectangular buttons. In AV Pro, even an animbrush can be a button. And you can import a brush for this purpose, or use the improved drawing tools in the object editor to create one.

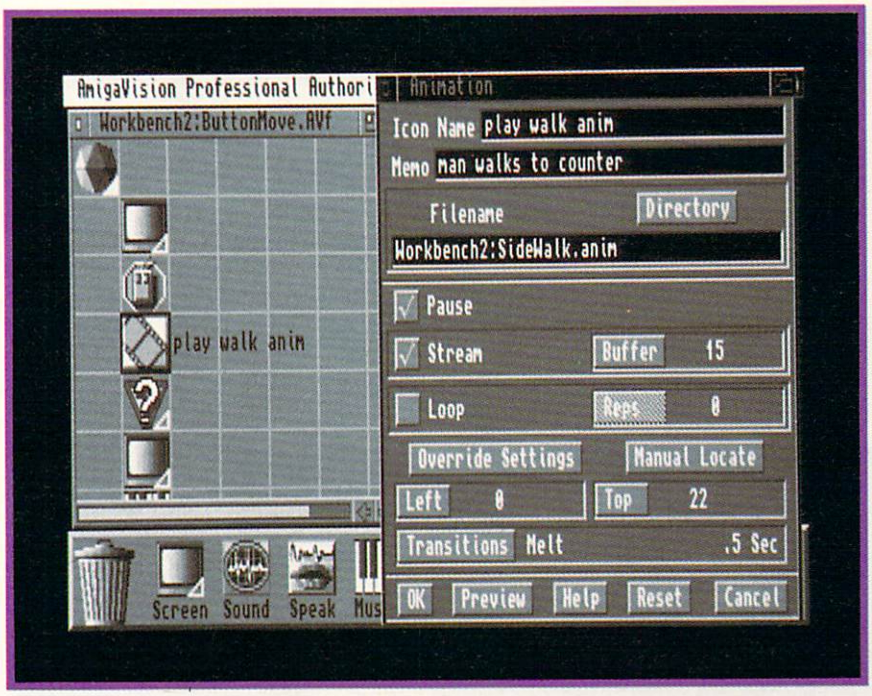
Flying Objects

With the new path creator, you can create and edit paths for buttons and objects to follow, with control over speed and movement along the path. For example, an interactive button could take the form of a bird flapping its wings and flying back and forth across the screen. You also now have control of object depth, so your bird could fly behind one button or object and in front of another. As a simple test, I created three AnimFonts (animated brushes of letters) moving around the screen, on circular paths. Each was a separate button. The arrangement worked perfectly, and was impressive.

Often, large animations can take a few seconds to load. To speed things up, ANIM streaming—which plays the ANIM as it is loaded, saving both memory and time—has been added. You can set the size of the buffer for streaming ANIMs.

Besides the standard Amiga graphics, AV Pro now supports the CDXL animation format for CDTV. You can even play a CDXL file within a window moving along a path. In fact, AV Pro is a powerful CDTV development system, with full support of CDTV functions such as automatic highlighting and support for the B button on the con-

To locate the vendors of the products reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 92.



AmigaVision Pro's main screen gives you access to many new features.

troller as a "back" button. You can even play tracks from audio CDs and audio sections from a CD-ROM.

Audio has been significantly improved: MIDI, which was limited to four channels in the original, now supports up to 20 channels; sound now supports streaming.

The Object Editor has been spruced up too, with a new paint-program-style menu bar, rather than a pull-down type. It is easier to use, and includes a button for dropping the menu out of the way to reveal more of the screen.

One of AV Pro's big changes is in object handling. Objects (anything you create in the Object Editor, or load in) can be named, are addressable by name, and can be manipulated from anywhere within the script. Objects can be addressed through the Expression Editor, and functions can be used to determine when an object moves to a specific position. You can add, load, clone, or delete objects, and their attributes can be directly manipulated with variables for sophisticated interactive applications.

Referencing requesters, which let you refer to another icon elsewhere in the script, have been changed. You can now reference an icon directly, or use a computed reference based on an expression.

Developers creating presentations for distribution or kiosks now have the option of limiting an application's memory use. If the kiosk system has 5MB but you have 12MB on your development machine, you can limit the system to 5MB (or any preset amount), or default to CDTV memory limits.

Other additions include conditional interrupts, variable-definition checking, external port communications without using ARexx, available memory checking, a customizable pointer, and manual location of animations, screens, and brushes.

My Wish List

I'd like to see a few more things: ARexx control over objects and attributes would be useful; the Animation requester should include the option of playing an ANIM and holding the last frame; complete support of AGA—all resolutions; better support of new synthesized-speech capabilities. Overall, though, I am impressed with the new features.

While a number of other interactive-development tools are available (and I have them all), AmigaVision Professional will be my primary tool. Besides being very powerful, it is also very easy to use and has the best interface of any available multimedia package. If interactive multimedia is an area of interest to you, you can't afford to be without AV Pro.

—*Geoffrey Williams*

One-Stop Music Shop

Blue Ribbon Soundworks, $649.

A2000, A3000, A4000.
Internal, expansion slot connection.
Installation: Easy.
Hard-drive installable software.
Not copy protected.
2.0 (and up) compatible.
Accelerator compatible.
Minimum system: 1MB of RAM
Recommended system: 1+MB of RAM, hard drive.

Sample player and MIDI interface for multimedia producers and composers.

Electronic musicians will note well the introduction, a few years back, of the easy-to-use Proteus, a single-rack space MIDI sound module featuring 32-note polyphony and great ROM sounds.

Now, with Blue Ribbon SoundWorks' One-Stop Music Shop, Amiga owners can have a Proteus built in to their computer. At its heart is the actual sound engine from the Proteus, piggybacked onto an expansion card usable in an A2000, 3000, or 4000 card slot. Also onboard is a MIDI interface with MIDI in and out ports separate from the serial port.

Other Features

Software includes a full-blown editor for the sound engine, an ARexx-controllable MIDI file player with several demo MIDI files, tools that allow One-Stop ►

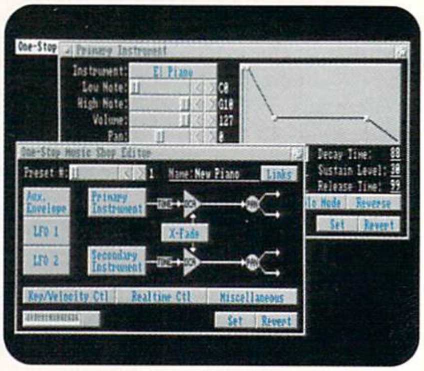
to be used with Bars and Pipes Pro and as a stand-alone source, a PatchMeister driver, and a demo of SuperJam 1.1.

The sound engine is essentially a ROM-based sample player with 213 sampled waveforms, which are used as sound sources and manipulated in a basic synthesizer-like architecture. The resulting sound is defined as a preset, which can be saved to disk. Output is via a pair of RCA jacks on the back panel of the card.

A preset is made up of two waveforms—the "primary" and "secondary" instruments, which can be modulated separately by two low-frequency oscillators (LFOs) and an envelope generator. Each instrument can then be shaped by its own dedicated envelope generator. The sound engine packs some unusual features: Crossfade, rather than playing primary and secondary instruments simultaneously, gradually fades from one to the other; Sound Start lets you start a sound from any point in the sample; Reverse plays the sample backwards.

The sound engine's architecture becomes clear once you begin working with the editor. The signal path is displayed in the main window with buttons representing modules with editable parameters. The three basic modulation sources (LFOs 1&2, and the auxiliary Envelope Generator) are at the left of this screen. Each LFO offers five waveshapes (sine, sawtooth, triangle, square, and random), with the typical amount, rate, and delay controls—not so typical is a variation control. Three buttons (Key/Velocity Control, Realtime Control, and Miscellaneous) let you define modulation sources and destinations.

Click either the primary or secondary instrument buttons and a window containing these parameters appears. Click



One-Stop Music Shop spreads its controls over multiple windows.

in the instrument box to scroll through all of the sampled waveforms to select the one that will be the basis for this sound. Below are sliders to set instrument range along with volume, panning, tuning, start point, and delay (up to 13 seconds). At right is a graphic envelope to set the instrument's dynamic shape.

A "Chorus" button uses MIDI doubling to double the number of voices for a chorus effect. The Link button lets you combine up to four presets in either layers or zones across the keyboard range. A small keyboard representation lets you audition the sound.

Making Music

One very attractive feature is the fine integration with other Blue Ribbon products. Aside from the stand-alone One-Stop editor, there is an accessory version for Bars and Pipes Pro that, once loaded, runs from inside the program.

Sound engine in and out tools are placed in the pipeline to access the sound engine sounds, and a separate set of MIDI in and out tools is used to address the MIDI interface resident on the One-Stop card. A General MIDI tool can also be placed in the pipeline to send

program changes to the sound engine. This tool sends patch numbers 0–127 while displaying a corresponding General MIDI Standard patch name. The stock sounds in the sound engine also conform to the GM spec.

The sound engine is also supported by Blue Ribbon's universal patch librarian, the PatchMeister, which lets you organize and manipulate sound engine patch banks, and can also be run as an accessory in Bars and Pipes Pro.

Using the Loop Back tool, the sound engine can also be used with other sequencers or as a stand-alone sound source. This entails routing the MIDI out from the Amiga MIDI interface or from your master controller to the MIDI in on the One-Stop interface.

SuperJam (version 1.1 and higher) works very nicely with One-Stop. When SuperJam senses One-Stop, it automatically replaces the turbo sound option with the sound engine and redirects MIDI communication through the One-Stop interface, freeing the serial port.

CONCLUSION

I have only one small complaint: You can't disable an incoming MIDI channel; every channel is assigned a sound. Though this should be a problem only for non-Bars and Pipes users with multiple sound sources and controllers—I could suggest a work-around such as creating a "zero" patch—a channel-specific data filter would be a helpful addition.

Nevertheless, this is an excellent product. It's especially useful for multimedia applications, but anyone making music with an Amiga could make good use of One-Stop. This is definitely one of the best Amiga music products that I have seen so far.

—Steve Quinzi

IMAGEFX

***Great Valley Products*, $399.**

Hard-drive installable.
Not copy protected.
Accelerator-optimized version included.
2.0 compatible; supports AGA.
Minimum system: 1MB of chip RAM.
Recommended system: 4+MB of RAM, hard drive, enhanced-display adapter, accelerator.

Image processing, 24-bit painting, special effects, scanner support, and polymorphic animation control.

In film and video, two currently hot topics are morphing and image processing. Fanning the fire, ImageFX incorporates extensive image processing, file-format conversion, image retouching, scanner and framegrabber support, as well as single, dual, and sequence morphing animation controls. The program gives you all this control over 24-bit true-color images, plus alpha-channel support, a clean intuitive interface, and generally fast execution.

I rarely start a review on such a glowing note, but these programs (ImageFX also includes CineMorph) are something to get excited about.

ImageFX imports Alias, ANIM, BMP, DPII, FLI, FLC, GIF, ILBM, Impulse, JPEG, PCX, PPM, PMG, Amiga and Windows Icon, RAW, Rendition, Targa, TIFF, DCTV, and HAM-E files. You can load them into the main buffer, a swap buffer, or the alpha channel. You can grab screens, place images in the clipboard, load brush images, scan from the Sharp JX100 or the Epson ES3000, or grab frames with GVP's IV24 or Progressive Peripherals' FrameGrabber.

Images can then be rendered to de- ►

vices such as Impulse's Firecracker, Centaur's OpalVision, IV24, a SAGE display, Digital Creations' DCTV, Black Belt's HAM-E, or to any Amiga display, including the new AGA resolutions. ImageFX displays a working full-screen image using the standard grayscale or color Amiga display for fast feedback, which is very helpful when your image is larger than the display area.

Gray Matter

ImageFX offers all the basic painting and touch-up tools, along with "Magic Scissors," which helps you pick up brush areas without the background. While I would prefer a tool to provide an easily modifiable stencil, the manual suggests that you use the alpha channel as a frisket or stencil to protect areas.

The alpha channel is a 256-shade grayscale image you can use to control effects on the 24-bit image, without necessarily altering color values of the image. Areas that are closer to white in the alpha channel have a greater effect than those that are closer to black.

While this may sound confusing, the quality of the effects can be remarkable. The water-drop effect in the accompanying photo, created with an ImageFX special effect, was accomplished using the alpha channel to generate the alteration.

Other tools provide control over the image, as well, including color balancing, contrast, antialiasing, color limits, scaling, sharpening, and edge detection. There are also special effects for distortion (based on the alpha-channel image), waves, oil transfer, and others.

ImageFX fully supports ARexx and has add-on modules called Hook programs, which you can use in conjunction with image processing to add even more special effects, such as Black Hole, Spiral, and Explode. The Hook approach lets you add new modules without upgrading to a completely new program.

Morph Magic

One of ImageFX's Hook programs is CineMorph. Briefly, morphing is the ability to create transitional frames by controlling the movement of specific points of the start image to match those of the end image. The beginning and ending could be the same image, two different images, or a series of images as required for a full-motion morph.

The single-image morph is easiest to explain: Think of a picture on a sheet of thin rubber. When you poke your finger at the back side of the rubber, the picture stretches and distorts. You can create this same effect by moving the end points of the morphed image outward in a circular pattern that is about the size of your finger.

This example can be much more detailed and can be utilized over a series of images. ImageFX uses a grid pattern of points to control the begin and end points of your images. Your work area is two side-by-side windows that contain grayscale versions of the start and end im-



Combining ImageFX's alpha channel and effects controls yields stunning results. ►

BRILLIANCE™

PROFESSIONAL PAINT & ANIMATION

IT HAD TO HAPPEN...

We put the creators of Deluxe Paint ST™, Deluxe PhotoLab™, and DCTV Paint™ together with the goal of developing the most awesome paint and animation software ever for the Amiga. After many man-years of inspired design and programming, it is simply... **BRILLIANCE**!

IT'S AMAZING...

By far the best paint program ever created for the Amiga. Paint and animation features you wish you had before are here now. You can paint and animate in virtually every Amiga graphics mode including all of the new AGA modes! Brilliance also has a unique true color mode allowing you to create and modify full fidelity 24 bit pictures. Your Amiga has never shined as bright as it will with **BRILLIANCE**.



Artwork by Jim Sachs. Created at 640x480 in 256 colors on an Amiga 4000.

IT'S POWERFUL...

Multiple levels of UNDO allow you to experiment without fear. Written in assembly language for the quickest response, smallest program size and the most sophisticated features. A rich set of drawing modes will unleash your full creative potential. Multiple paint and animation buffers can be worked on at once, limited only by memory. The more memory you have, the better Brilliance becomes. Power, features, sophistication, ease of use, Brilliance has it all.



IT'S EASY...

The user interface was designed to put YOU in control, not the program. Quickly and precisely control all paint and animation features with the dynamic menuing system. It gets out of your way at the press of a button. A help window assists in identifying controls as well as current modes. The stacking menu bars can be user configured and recalled with function keys. You can even save your own configurations.

IT'S BRILLIANCE...

Once and for all, in one easy to use package, the total paint and animation system for the Amiga.

Best of all, it's from Digital Creations.

Works with all Amiga models.
Minimum memory requirement: 1 Meg.

Graphics modes supported:
Register based 2, 4, 8, 16, 32, or 64EHB Colors. 6 bit HAM, 12 bit true color, 24 bit true color.

With the new AGA Amigas:
Register based 2, 4, 8, 16, 32, 64EHB, 64, 128, and 256 Colors. 6 bit HAM, 8 bit HAM, 12 bit true color, 24 bit true color.

(True color modes are represented with HAM mode displays however they are maintained in full fidelity internal representations.)

Competitive Upgrade Program!

If you already own any current Amiga paint or animation package, you can upgrade to Brilliance for half price!

Just call our order department, Digital Direct, with your current paint package manual handy and order Brilliance for only $125.

But hurry, this is a limited offer!

Call DIGITAL DIRECT

1-800-645-1164

Dealers! Interested in participating in this competitive upgrade program? Call Digital Creations at 916-344-4825 to find out how.

DIGITAL CREATIONS

P.O. Box 97, Folsom CA 95763-0097 • Phone 916•344•4825 • FAX 916•635•0475

Circle 63 on Reader Service card.

ages, respectively, with the grid superimposed over them. Points can be added, deleted, grouped, and locked in place points, but unfortunately cannot be hidden.

For detail work, you can zoom in on the images. Point movement can be linear or by spline curve, and you can control point-movement acceleration and dissolve speeds both globally or on a local point-grouping basis.

Perhaps the best feature is that the morphing calculations are quite quick, although speed is, of course, dependent on your system, the image complexity, and the number of control points. In addition, this version of CineMorph lets you call another processing function and save the results in any of the supported file formats.

Another major feature in ImageFX is the use of virtual memory. If you don't have enough RAM to handle the processing for a large image, ImageFX uses your hard disk as virtual RAM. While this is slower, you can still complete your project. I manipulated an 8MB image on my 9MB machine with only a small difference in processing time from smaller images.

Pros and Cons

I was quite impressed with ImageFX; it has a better user interface, wider file support, and more features than its competition. The documentation, while well written and well indexed, is unfortunately incomplete. It does not explain many of the parameters used for special effects, and the tutorials refer to pictures and projects not included on the disks.

If you are looking for flexible image-processing and morphing capabilities, you will want to consider adding this one to your disk of tools.

—Steven Blaize

DirectoryOpus Version 4.0

***INOVAtronics*, $99.95**

Hard-drive installable.
No copy protection.
2.0, AGA compatible.
Accelerator compatible.
Minimum system: 1MB of RAM.
Recommended system: 1+MB of RAM, hard drive.

Directory utility for file management, IFF and ANIM viewing, and playing sound files.

In the beginning there were two interfaces: Workbench and CLI. And the Amiga user looked at them, but not everyone thought they were good. Old-timers shunned point and click; novices couldn't get past the word syntax. So, both camps stubbornly clung to their favorite interface.

Fortunately, a few advanced thinkers envisioned a marriage of the two interfaces that promised to provide both Workbench friendliness and CLI power. Thus the directory utility was born. What began as a simple matrix of buttons and one single window, today has evolved into a dynamic and versatile interface in its own right.

New Features

DirectoryOpus's claim to fame is its configurability. With this latest release even more flexibility is available.

The list of new enhancements for ver-

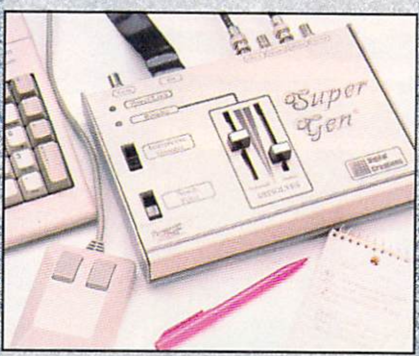
Continued on p.26

HOT NEW PRICES

SuperGen

GENLOCK AND OVERLAY SYSTEM

- Only broadcast quality genlock for less than $1000
- Two independent dissolve controls
- Software controllable
- Compatible with all Amiga models
- Notch filter



- The industry standard - yet to be equaled

NEW PRICE! SuperGen $549.00

SuperGen2000s

THE FIRST TRUE Y/C GENLOCK AND OVERLAY CARD FOR THE AMIGA 2000 SERIES COMPUTER

- S-VHS, ED-BETA, Hi8 compatible
- Broadcast quality NTSC RS-170A output
- SC/H phase adjustability
- Built-in sync generator
- Two independent dissolve controls



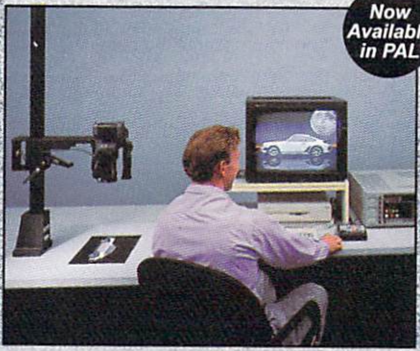
NEW PRICE! SuperGen 2000s $1195.00

DCTV

THE FUTURE IS HERE!

Create spectacular true color animations on your Amiga.

Now Available in PAL



Paint, digitize and display beautiful full color composite video images on any Amiga.

Capture an image in 10 seconds from any color video camera or stable video source.

Full-featured paint, digitize and conversion software included.

Compatible with AGA 1200 and 4000 Amigas in NTSC/PAL modes. Two to four times the speed of AGA animations (DCTV vs. HAM8) with greater color and resolution.

Compatible with all popular 3D, rendering, and graphics packages including:

AD-Pro, Aladdin 4D, AmigaVision, Brilliance, Calligari, Cinemorph, Draw4D, ImageMaster, Imagine, LightWave, MorphPlus, Real 3D, Scala, Scenery Animator, Sculpt, VistaPro, and many others...

NEW PRICE! DCTV (NTSC or PAL) $299.00

RGB CONVERTER



Allows the use of DCTV with standard RGB monitors (1084) in standard NTSC or PAL modes. Also permits the use of external genlocks like our SuperGen.

NEW PRICE! RGB Converter $199.00

The Kitchen Sync™

TWO CHANNEL TBC SYSTEM



The Kitchen Sync provides two channels of time base correction - the perfect low cost TBC solution for the Video Toaster™.

With a Video Toaster, the Kitchen Sync provides a complete A/B roll editing system.

Two complete infinite window time base correctors on one IBM AT/Amiga compatible card.

- Absolute 100% broadcast quality
- Composite or Y/C video in
- Includes easy to use external control panel
- No waveform monitor needed
- Variable speed strobe
- Freeze Frame, two rock-solid Freeze Fields
- Low power consumption
- Lowest TBC price per channel
- Works with consumer grade VCRs

NEW PRICE! Kitchen Sync $1295.00

Genlock Option

Required to synchronize the Kitchen Sync to an external video source.

NEW PRICE! Genlock Option $150.00

S-VHS Option

Required to enable S-VHS/Hi-8 (Y/C) video outputs.

NEW PRICE! S-VHS Option $99.00

VISA MasterCard **FREE 2nd Day shipping on all VISA & MC orders in the US.** UPS

Next Day Shipping add $5.00. COD - Cash only - add $10.00.

Call by 2:00pm PST/5:00pm EST for same day shipping.

CALL DIGITAL DIRECT 1-800-645-1164 Orders only

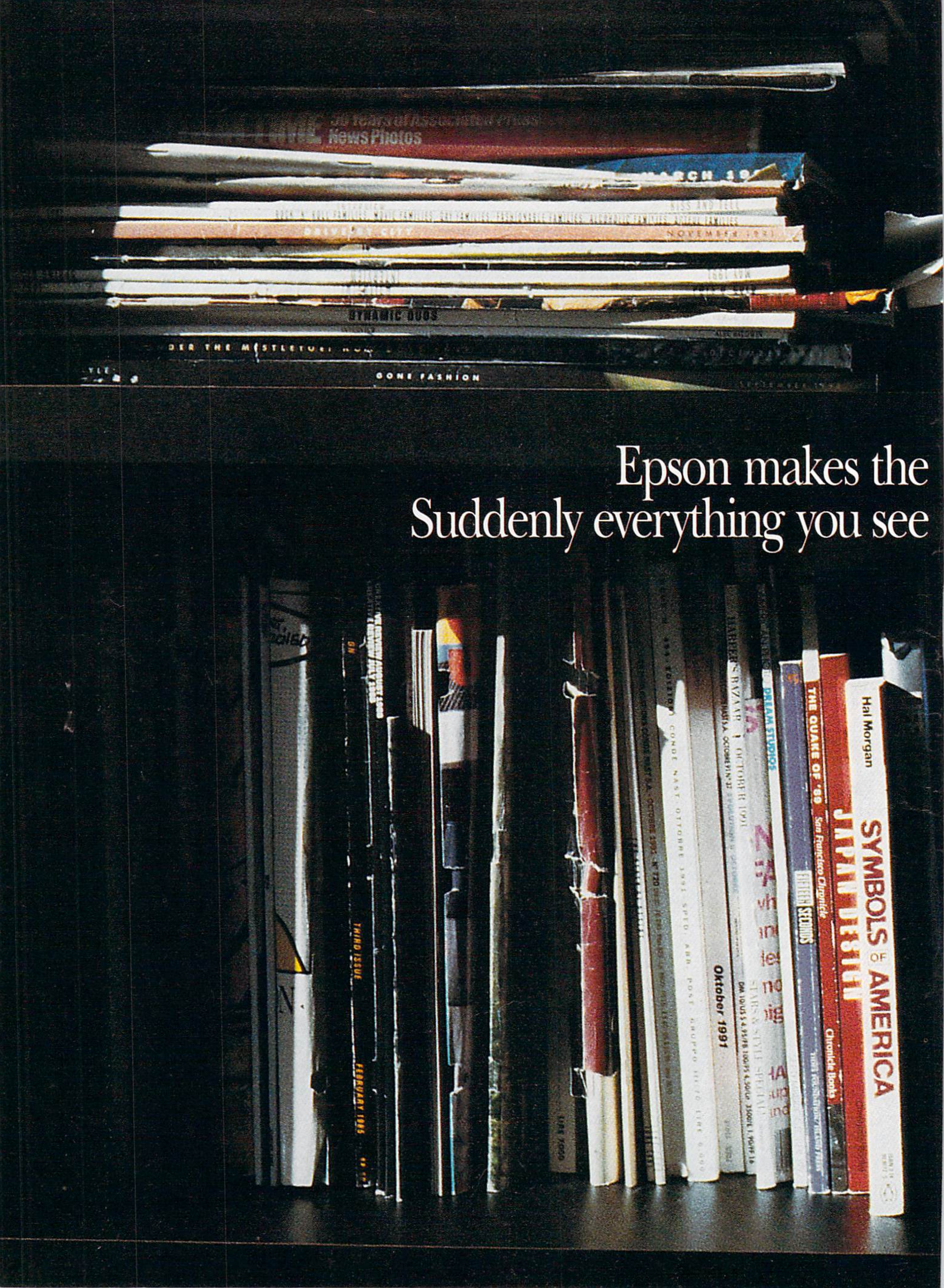
9:00am to 5:00pm PST M-F

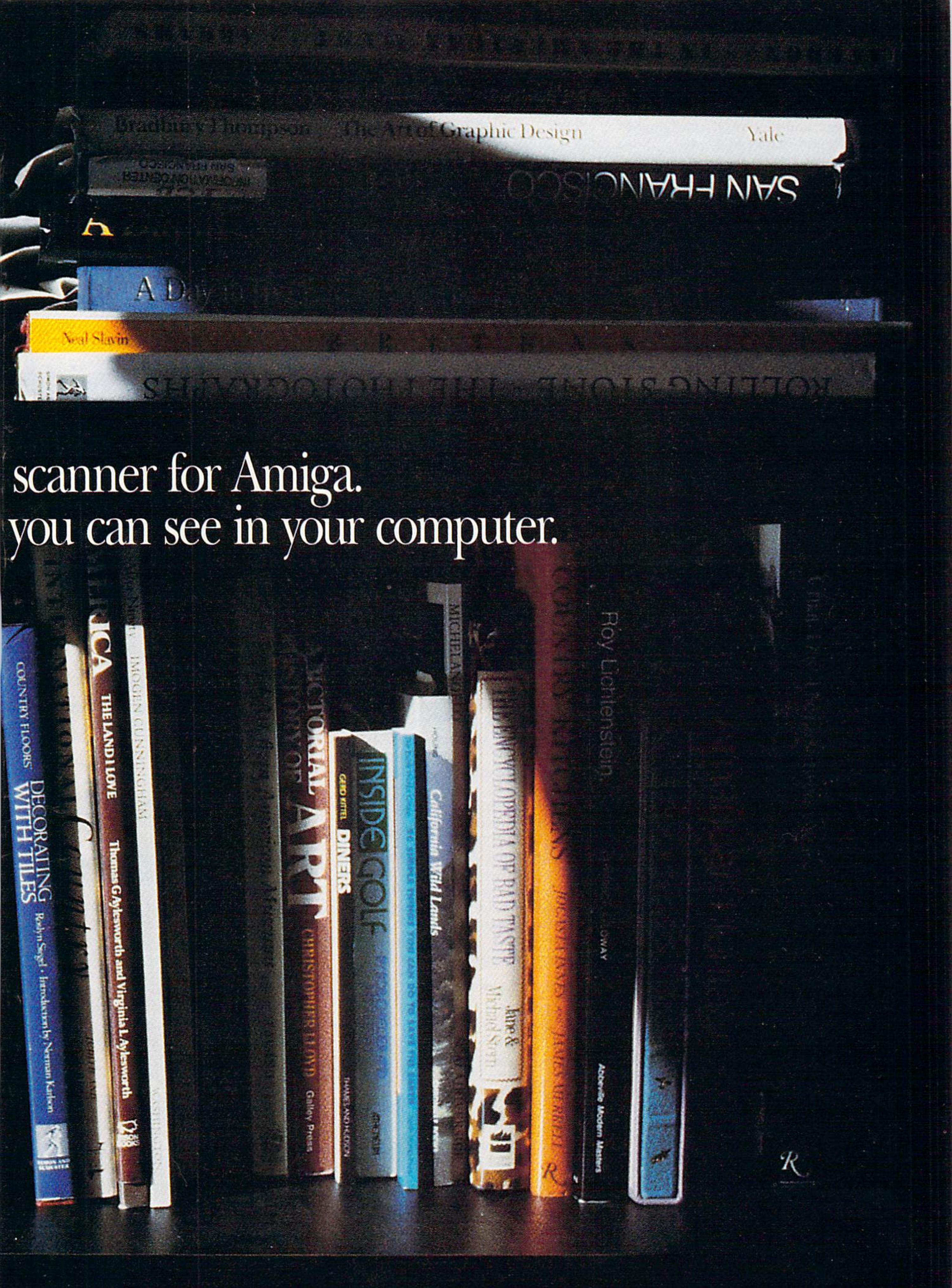
For technical information call 916-344-4825

DIGITAL CREATIONS Worldwide Distributors and Dealers Wanted. Inquiries invited.

P.O. Box 97, Folsom CA 95763-0097 • Phone 916•344•4825 • FAX 916•635•0475

Circle 16 on Reader Service card.


Epson makes the
Suddenly everything you see
News Photos
NOVEMBER 1991
DYNAMIC DUOS
GONE FASHION
THIRD ISSUE
FEBRUARY 1985
CONDE NAST
Oktober 1991
HARPER'S BAZAAR
DREAM STUDIOS
THE QUAKE OF '89
San Francisco Chronicle
JAPAN DESIGN
Chronicle Books
Hal Morgan
SYMBOLS OF AMERICA

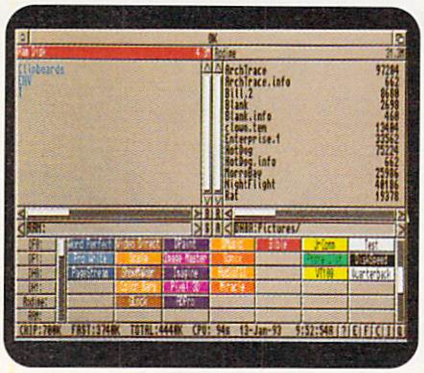

scanner for Amiga.
you can see in your computer.
Bradbury Thompson
The Art of Graphic Design
Yale
SAN FRANCISCO
Neal Slavin
ROLLING STONE · THE PHOTOGRAPHS
COUNTRY FLOORS'
DECORATING WITH TILES
THE LAND I LOVE
Thomas G Aylesworth and Virginia L Aylesworth
IMOGEN CUNNINGHAM
PICTORIAL HISTORY OF ART
CHRISTOPHER LLOYD
Gallery Press
DINERS
INSIDE GOLF
California Wild Lands
THE ENCYCLOPEDIA OF BAD TASTE
Jane & Michael Stern
Roy Lichtenstein
Abbeville Modern Masters

From p.22

sion 4.0 is an arm long, but here are the hot ones: unlimited user-configurable buttons, user-definable menus, and device buttons; graphic support for all AGA chip-set capabilities; display of all ILBM formats; and playback of ANIMS and animbrushes.

Audio playback now supports more sound module programs. The internal Diskcopy, Format, and Print functions are now stand-alone modules like the Configuration program and offer a plethora of options and functions. All DirectoryOpus menus, requesters, and configuration edit screens greatly benefit from an AmigaDOS 2.0-style facelift.

However, INOVAtronics has added one special icon of its own design that puts the icing on the cake. Whenever a field has a list of commands, options, or files to select, a small magnifying-glass icon appears next to the field's status line. Clicking the icon calls up a new requester that lets you select the desired item.



DirectoryOpus 4.0's flexibility and AGA support make it a powerful utility.

Upon opening the package, you'll notice that the manual has grown right along with the program. Its 272 pages are logically organized, and all major sections are now numbered, allowing easier reference. The first 174 pages are devoted to a detailed explanation of DirectoryOpus operation and capabilities, including an improved, expanded look at every command and function. The combination of new requester interface and better manual guarantees you'll get more out of this version of DirectoryOpus.

While the program can be run from disk, it is designed to be integrated into your boot configuration. Commodore's standard installation utility is used to install the program and its files, so first-time users, as well as current DirectoryOpus owners, should find the process simple and straightforward. If you convert from a version later than 3.22, all modifications and customizing you may have incorporated into DirectoryOpus will be retained. When 4.0 is started it will look and act just like your previous version. (Please note: If you are using DirectoryOpus Version 3.22, you must delete the DirectoryOpus.CFG file normally found in the S directory before installing version 4.0.)

Working with Opus

Examining the Project menu reveals the first new option—Button Iconify, which will transform your DirectoryOpus screen into a bank of buttons. The number of bank-rows displayed is selectable from within the configuration program. Now you can access DirectoryOpus's action buttons directly from the Workbench screen.

A quick look around the DirectoryOpus window reveals the same friendly layout as in previous versions. Upon closer examination, you'll discover that some buttons have dog-eared folds, indicating dual-action buttons. This seemingly small change greatly improves program use. Many similar little tweaks in the program set DirectoryOpus above other directory utilities and make it a real powerhouse.

To accommodate the increased number of drive and control buttons, sliders appear alongside each group of buttons, providing a quick way to page through them. You can now resize the source and destination windows horizontally within the confines of the DirectoryOpus window. The directory-tree function has been graphically enhanced, making it much easier to read.

A Show of Strength

The real power of version 4.0 lies in the new edit windows and the greatly improved user manual. Together they make it so much easier to modify DirectoryOpus and capitalize on its built-in strengths.

I normally configure the Show function to display an image for just one second. But there are times I'd like to study an image. In the past I'd either modify the command via the Configure program or start a different viewer. The following modification illustrates how easy it is to create a dual-action button and reprogram the existing Show command for my needs.

From the Button Edit Screen in the Configure program make these changes. First select the Show button and add the following new entries:

```
Command Modify ShowDelay 1
Command Show
```

Now from the other bank select the button that corresponds to Show and name this button View. From the Button Edit Screen add these new entries:

```
Command Modify ShowDelay 0
Command Show
```

Now left-clicking the Show button displays images in one-second intervals as before. But right-clicking Show activates View, which displays and holds the image on screen as long as you like.

This simple example demonstrates the power and flexibility of every DirectoryOpus command and DirectoryOpus itself. From its outset, Workbench should have had the form, function, and power offered by this new version of DirectoryOpus. At least we can have it today.

—Joe DiCara

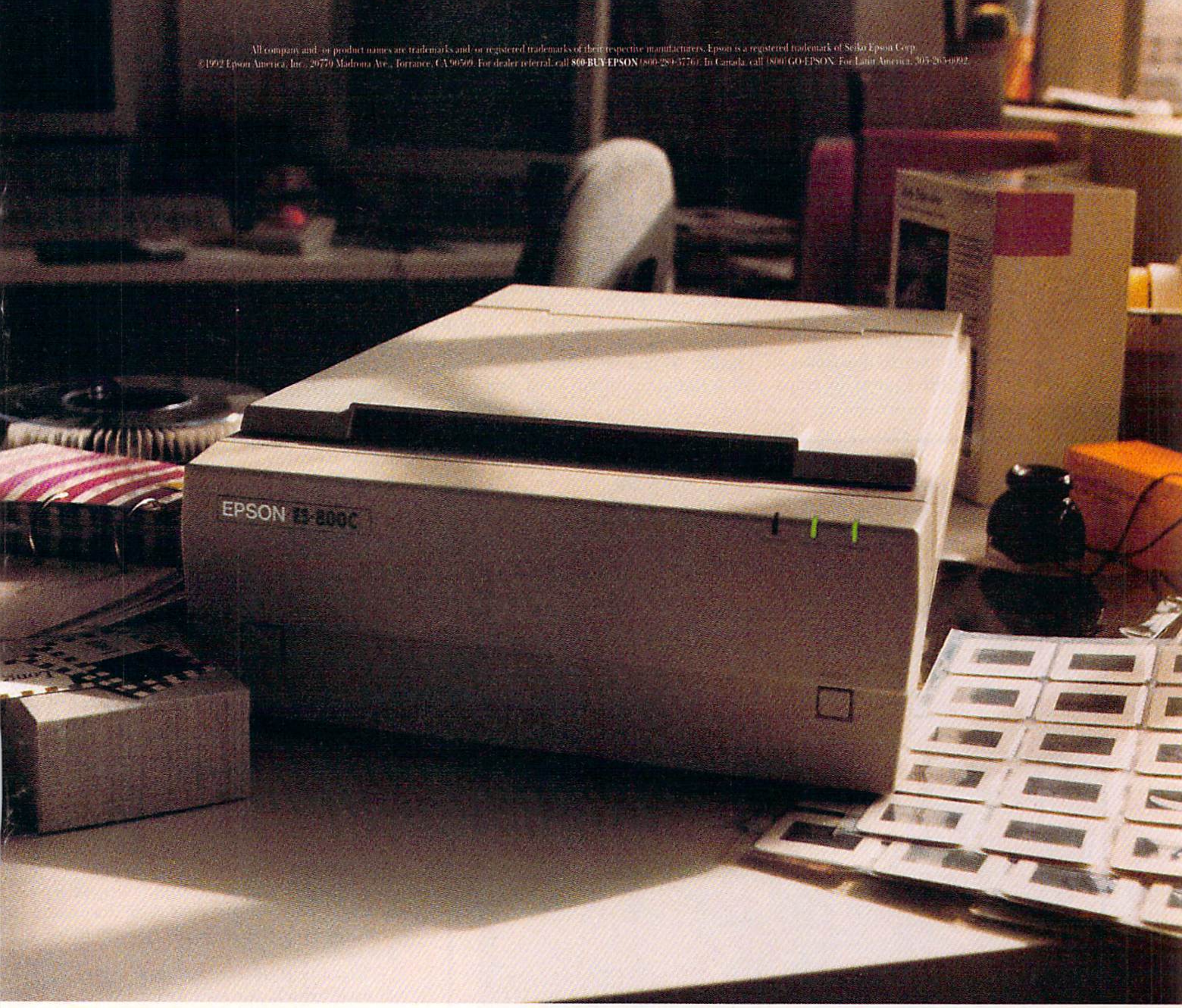
Address-It!

Legendary Design Technologies Inc., $39.95.

Hard-drive installable.
Not copy protected.
2.0 compatible.
Accelerator compatible.
Minimum system: 512K of RAM.
Recommended system: 1MB of RAM, hard drive.

List management.

Address-It! is the easiest, most complete program I've ever used to generate and track lists. Address-It! provides a simple, intuitive way to deal with names and addresses, offering time-saving shortcuts for data entry. For example, you can double-click certain field titles, such as salutation or state, to call up a requester. Double-clicking one of the ►



High resolution color scanners. New from Epson.

Epson® introduces eyes for Amiga®. Coupled with an ASDG ADPro® driver, Epson offers the best flatbed scanning combination available for Amiga.

Greater speed and higher resolution is a given for both models, and whether you opt for the 600C or 800C model, you always get 24-bit single pass color scanning with almost 17 million colors. But Epson also offers an automatic document feeder attachment and an add-on transparency unit, which give you the flexibility to scan slides. And of course it's all protected by Epson's one-year warranty.

So drop by your computer store soon and take a look or call **1-800-289-3776** and ask for representative 81 for more information. Just don't be surprised if you end up with an Epson scanner.

EPSON®



Desktops *Scanners* *Dot Matrix* *Lasers* *Notebooks*

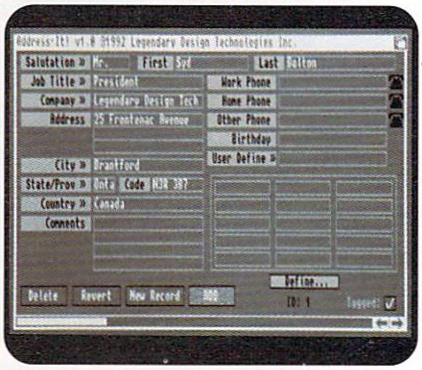
choices automatically enters that information into the appropriate field.

Custom Database

As with any database, Address-It! lets you sort through your data in several ways. You can use a proportional gadget at the bottom of the main screen for casual browsing. Or, use one of the numerous ways to locate specific records, most of which have hot-key shortcuts.

A unique search feature in Address-It! is controlled by the 15 initially empty boxes on the main screen. Click the Define gadget below them, and you can enter a text string, which then appears in one of the 15 boxes.

For instance, if you're in charge of your user-group's newsletter, you could fill these boxes with different system configurations. Make one A500, one A2000, one for hard drive, and so on. Now, each of the 15 boxes is a flag that you can toggle on or off for each record. As you enter members' names, click the appropriate flags that define their systems. With just a couple of mouse clicks, you can later send customized notices to only the subgroups that would be interested in them.



Address-It! gives you quick access to your address-book records.

In addition to mailing labels and index cards, Address-It! also generates address and phone pages and envelopes. Requesters let you specify either standard or custom page sizes, and the program shows you a preview of your layout. You can print envelopes with or without a return address or an attention line. All of the forms allow you to choose which information fields are printed, and you can change the field length to fit your data.

Address-It! also imports and exports data in WordPerfect, ProWrite, and ASCII formats, so you can import a list of customers from your database, select certain groups, and then output the data to a mail-merge word-processor document, all without retyping your names and addresses.

The only drawback is the 40-page manual, which appears to have been hastily duplicated and trimmed so close that parts of some letters were cut off. The documentation is still readable, but the printing and binding job needs improvement.

Address-It! is a flexible, easy-to-use program. I look forward to the forthcoming inventory and invoicing programs that will interface with Address-It!. These additions should make it a complete business package.

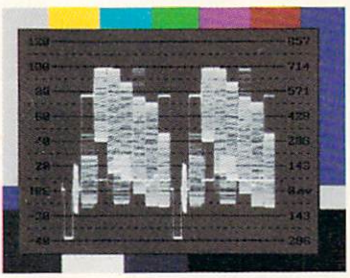
—Rob Hays

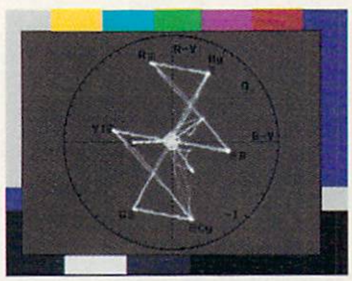


A Cure For The Colorblind Toaster.



It's the new DPS PERSONAL V-SCOPE™ card. The world's first waveform monitor and vectorscope for desktop video. A perfect companion for your Video Toaster,® our PERSONAL V-SCOPE lets you superimpose a digitally synthesized waveform monitor and vectorscope on any video signal. So now you can precisely measure video levels and test for true colors. We even include PERSONAL TSG Software with more than 30 industry standard test signals for display with your Video Toaster. Buffered video output. Dedicated full-time output and superimpose output. Hardware rasterizer with electronically generated graticule scales. And more. All compatible with AMIGA® and IBM PC.® Use the DPS PERSONAL V-SCOPE by itself or combine with our PERSONAL TBC II card for a fully integrated video processing, manipulating and monitoring system. Best of all, it shows your true colors just for a little green. Only $995.





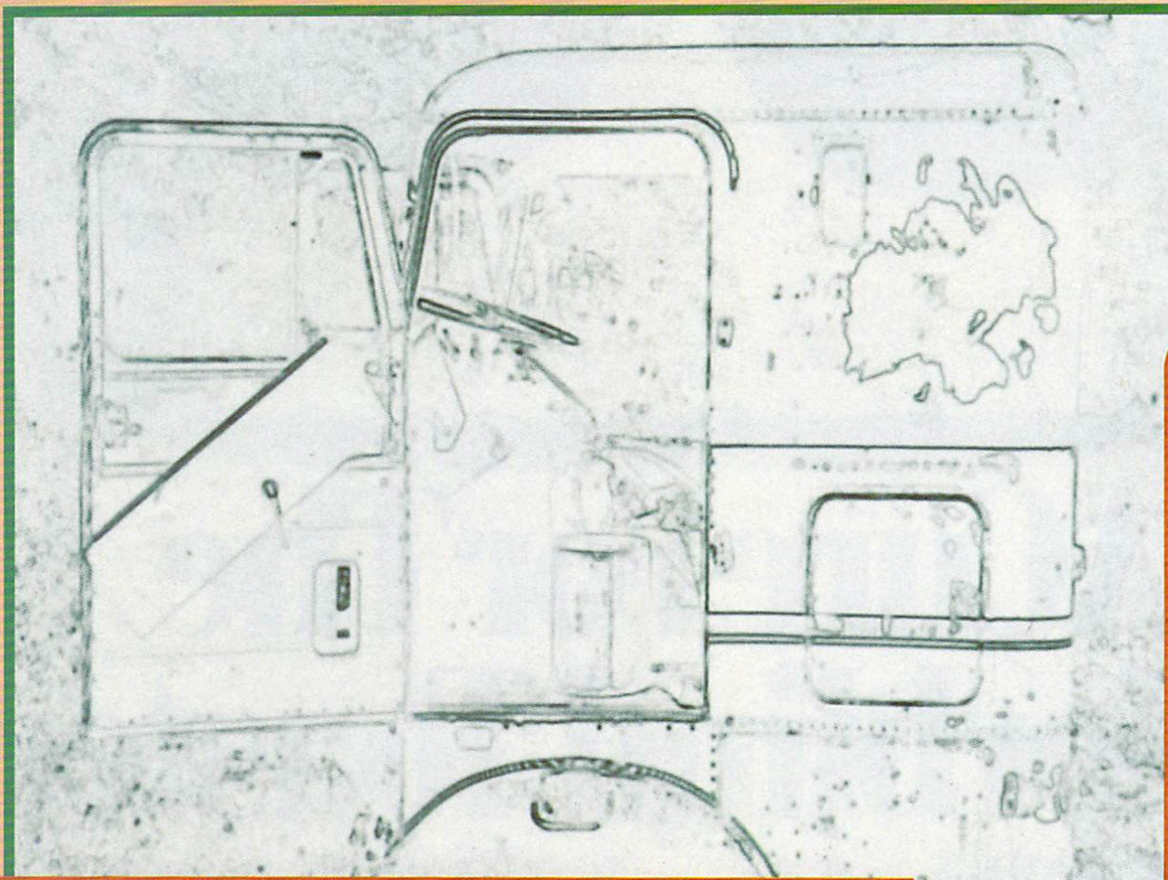
Actual Monitor Photos

DIGITAL
PROCESSING SYSTEMS INC.
If you want to look your best

55 Nugget Avenue, Unit 10 • Scarborough, Ontario M1S L31 Canada • (416) 754-8090 Fax: (416) 754-7046
11 Spiral Drive • Florence, Kentucky 41042 • (606) 371-5533 Fax: (606) 371-3729

Video Toaster® is a registered trademark of NewTek Incorporated. PC® is a registered trademark of IBM Corp. AMIGA® is a registered trademark of Commodore-Amiga, Inc. DPS PERSONAL V-SCOPE™ is a trademark of Digital Processing Systems, Inc. DPS PERSONAL TBC® is a registered trademark of Digital Processing Systems, Inc.
Circle 171 on Reader Service card.

THE *GREAT*



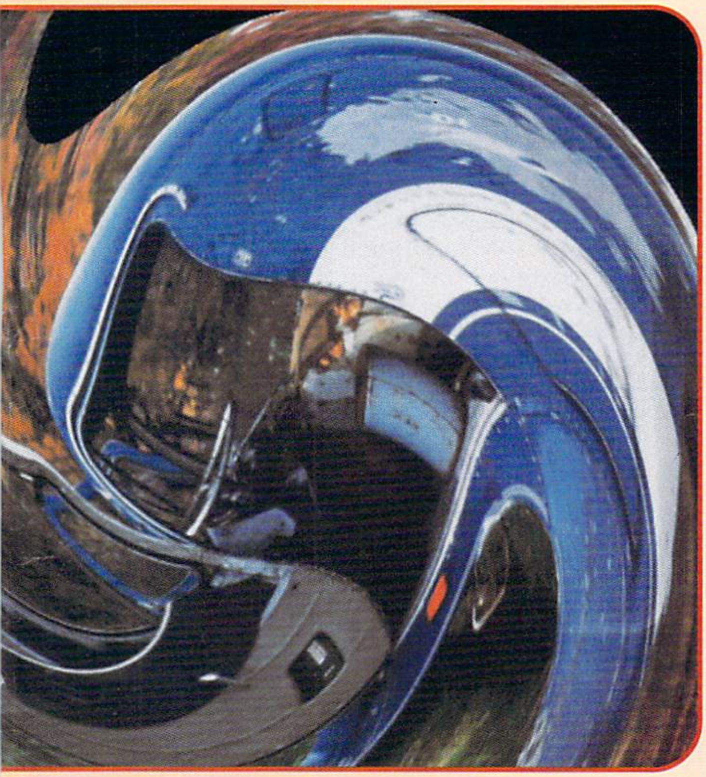




Heredity isn't everything, as the images above demonstrate. Both derive from the photo (lower left). At top, ADPro's Line Art effect brings out subtle outlines; at right, the program's Swirl function puts a whole new spin on things.

MANIPULATORS

BY DEREK GRIME



Amiga image-processing software is continually evolving, allowing you to alter more images more skillfully.

TODAY'S COMPUTER ARTIST has a freedom the traditional artist cannot even imagine. Traditional media are permanent, but computer pictures can be mixed, blurred, sharpened, converted, and enhanced. Furthermore, computer artists need not start from scratch with each work. With image-processing software, you can instantly apply effects to any images, including digitized photos.

Lately, much has happened in the realm of Amiga image processing. Before you put cursor to screen image, you should know how the available tools stack up. What are the programs' strengths and weaknesses? Which package gives the best dollar value? Which offers the most features? And most importantly, what is the right choice for you?

In seeking the answers to those questions, I reviewed what were, at press time, the latest releases of the Amiga's three main image-processing programs: **Art Department Professional 2.2** ($299, ***ASDG***), (**Imagemaster 9.23** ($199.95, ***Black Belt Systems***), and **ImageFX 1.03** ($249.95, ***GVP***). (*To locate the vendors of products mentioned in this article, see the Manufacturers'/Distributors' list on p. 92.*)

ASDG's The Art Department followed the Amiga's first wave of image processors—PIXmate (now out of production) and Butcher (now part of Eagle Tree Software's authoring program Helm). Since upgraded to Art Department Professional, ADPro introduced the new wave of image processing. It has earned its good reputation, and ASDG continues to improve it; version 2.3 may be out by the time you read this.

ADPro's first challenger was Imagemaster. The program has an incredible range of features, and Black Belt constantly releases upgrades. In fact, Black Belt ►

ORIGINAL PHOTOGRAPH BY ANN DILLON

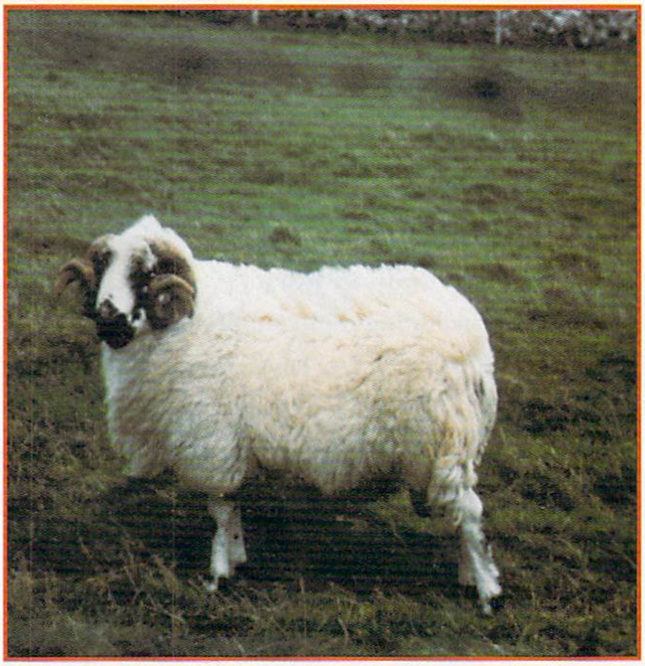
was promising imminent release of Imagemaster 9.24 as we went to press.

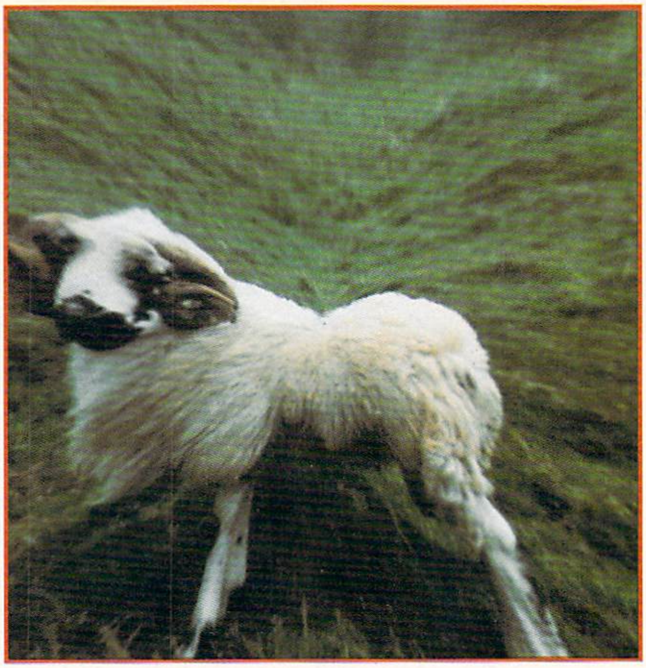
The new kid on the block, GVP's ImageFX, was released in late '92. ImageFX is far more than just a picture manipulator. GVP has packed in so much value that ImageFX must be considered by any serious user.

Let's start our exploration of the programs' differences by comparing their file-format finesse.

Graphics In, Graphics Out

Before processing an image, you must load it into your software. While Amiga users are lucky to have just one major file format with IFF, the rest of the world is dogged by a maze of differing formats. On a DOS machine you may run into TIFF, GIF, Targa, and BMP, to name just a few. To make matters worse, formats often come in different versions. A TIFF file saved from a paint program may not load into a desktop-publishing program, and vice versa.





Imagemaster's Caricature operation gave the original sheep (above) an hourglass figure (below).

Why does this matter to Amiga users? Because you want to be able to draw from as many sources as possible. We've included a matrix (see the sidebar "Reading, Writing, and...") which shows how the trio fares in terms of loading and saving various picture files. Keep in mind that support for dozens of formats looks impressive on paper but unless the software supports all the format's variations, results can be disappointing.

For these tests, I used two different programs on an SGI workstation to generate 24-bit files in four formats each: Targa, GIF, TIFF, and Alias. I then attempted to load the eight files into each of the three Amiga programs. I used the auto-load features of both ADPro and ImageFX, which automatically try to decipher the format of the file; Imagemaster has no such feature and requires you to specify the file format before loading.

ADPro performed like a pro; while it does not support Alias, its universal-load feature recognized each of the three other formats automatically.

ImageFX supports all four of these formats but could read only the GIF and TIFF files automatically. It recognized and loaded the other pictures only after I specified their formats.

Of the four formats I tested, Imagemaster supports only Targa. It could not, however, read any of the test Targa files correctly. While it did attempt to load the files, the results were nothing like the originals.

All three of the programs performed well when writing files. The workstation software could read all the pictures the Amiga programs generated, although Imagemaster's Targa output was marred by vertical lines.

ASDG claims that ADPro is "image processing's common ground." It certainly comes close. Not only does ADPro support more image formats than its two competitors, but the program makes an effort to support all the formats' many permutations. ASDG should be applauded for a job well done. There is a cost for such flexibility, however. Support for Targa, TIFF, Sun Raster, and other higher-end formats is not standard, but requires the purchase of ASDG's Professional Conversion Pack ($90).

The Learning Curve

If you're the type of person who hates to read manuals, then either ADPro or ImageFX is your best choice. While ImageFX employs simple icons for many of its functions and ADPro goes for a push-button approach, both programs provide easy-to-use, intuitive interfaces.

Imagemaster is not so straightforward. It requires you to dig for the functions you want to use. For example, to solarize a picture you must go from the main panel to the process panel and then to the special-effects panel where you click on the solarize option and then flip back to another panel to define the

area to be processed. The program gives you access to lots of power, but makes wielding it trickier than it has to.

Manuals are important and ASDG has provided the best of the group. At more than 300 illustrated pages, it is well written and comprehensive. ImageFX comes close with more than 200 pages, including an immense ARexx reference section.

Imagemaster's manual is adequate, though it does not explain every aspect of the program. A ReadMe file on the program disk contains more than 250K of information. That's 110 pages! You are supposed to print this monster and add it to the manual. (Apparently, a lot has changed since the initial release.) Black Belt knows this is a problem and is working on a new manual, but it's cold comfort to a new user faced with hours of printing. Despite this weakness, Imagemaster's is the only manual that includes examples of processed pictures so you know what your results should look like.

Convolutions and Transformations

Once a picture is loaded, all three programs can work miracles, yet each approaches the same process with a different attitude. ADPro offers a full-screen control panel and does all its magic out of sight on a background screen. ImageFX and Imagemaster provide half-screen panels that allow you to see the processing as it happens.

There is much overlap in functionality among the three. One program may refer to a feature by the name "collapse" while another calls a similar feature "the black hole."

ADPro has a large range of tools and lets you choose ►

Reading, Writing, and . . .

The more image formats and equipment a program fully supports, the more flexibility it offers. While the main article details my experiences with each program's format support, *this* matrix shows the range of loaders, savers, and device drivers the software provides.

IMAGE FORMATS:

LOAD	ADPro 2.2	ImageFX 1.03	Imagemaster 9.23
Abekas	B		
Alias		Y	
ANIM	C	Y	Y
BMP	Y	Y	Y
DKB			Y
DPaint IBM	Y	Y	
DigiView21	Y		Y
GE MRI			Y
GIF	Y	Y	Y
IFF	Y	Y	Y
Imagine	Y	Y	Y
JPEG	Y	Y	Y
NASA JPL, FITS, PDS			Y
MacPaint	Y		Y
PBM		Y	
PCB			Y
PCX	Y	Y	Y
PICT	D		
QRT	Y	Y	Y
Rendition	A	Y	Y
Sculpt	Y	Y	Y
SunRaster	A		
Targa	A	Y	Y
TIFF	A	Y	Y
XWindow	A		
YUVN	Y		

SAVE	ADPro 2.2	ImageFX 1.03	Imagemaster 9.23
Abekas	B		
Alias		Y	
ANIM	C	Y	Y
BMP			Y
DPaint IBM	Y		
GIF	Y	Y	Y
IFF	Y	Y	Y
Imagine	Y		Y
JPEG	Y	Y	Y
PBM		Y	
PCX	Y		Y
PICT	D		
PostScript	Y	Y	
QRT	Y		
Rendition	A	Y	Y
Sculpt	Y	Y	Y
SunRaster	A		
Targa	A	Y	Y
TIFF	A	Y	Y
XWindow	A		

DEVICE SUPPORT:

	ADPro 2.2	ImageFX 1.03	Imagemaster 9.23
A2410	Y	Y	
Abekas	B		
Amiga1200/4000	Y	Y	Y
DCTV	Y	Y	Y
Film Recorder	B		
Firecracker	Y	Y	Y
Framebuffer	Y		
Framegrabber	Y	Y	
HAM-E	Y	Y	Y
Harlequin	Y		Y
IV24	Y	Y	Y
OpalVision	Y	Y	E
Printers	Y	Y	Y
Resolver	Y	Y	Y
Scanners	B	Y	
Vivid24			E
VLAB Digitizer	Y		

KEY:
Y = Yes—program provides support
A = Available with Professional Conversion Pack.
B = Available as a separate product from ASDG
C = Now available in MorphPlus; promised for ADPro2.3.
D = Promised for next version of ProConversion Pack.
E = Promised for Imagemaster 9.24







values on separate control panels for many of the operators. These panels allow for precise adjustments and make ADPro a natural when doing fine-tuning for print or video. Operators include blur, collapse, line art, tile, and twirl. ASDG's MorphPlus ($295) works with ADPro to give you several additional operators. Incidentally, MorphPlus is ADPro's ticket to full-motion morphing, which is standard with Imagemaster and ImageFX. ADPro is fast, often much quicker than its competition.

ImageFX has many similar operators and makes them somewhat less involved by giving you limited control over each operation. If you don't want to operate on the whole picture, ImageFX makes it easy to choose a portion of the picture to work on. GVP also adds some standard paint tools (such as magnify) and sports an undo button. In addition to providing such basic operators as blur and sharpen, ImageFX offers extra features via the Hook tool. Through "hooks" you can measure pixels and produce histograms, counting the red, green, and blue content of the image.

Imagemaster ups the ante considerably by adding more functions and filters than the other two combined. This is Imagemaster's true strength: dazzling effects that the competition hasn't even dreamed of. No where else can you find droop, contour, caricature, thicken, zig-zag, shine, blueprint, melt, and dome options. And there are many, many more. You can even add fake geographic elevations to an image or use a picture to create a real elevation map that can be loaded into VistaPro (Virtual Reality Labs) and rendered as a landscape. Everything you can do with ADPro and ImageFX you can presumably do with Imagemaster by combining its numerous special effects. Keep in mind that some of these nifty tools take a long time to process the picture. All in all, though, Imagemaster has the best bag of tricks.

A nice touch is each program's provision of batch processors that let you alter entire groups of images any way you wish.

If You Act Now...

There is more to this group than just image processing. For instance, all three programs include full ARexx ports that allow you to create new functions and modify existing ones.

The troika works with the entire range of Amiga displays. Oddball formats like SHAM (high-res HAM) are here, as well as the new AGA and HAM8 modes offered by the A1200 and A4000. There is good support for third-party display cards such as Impulse's Firecracker 24, GVP's IV24, and Digital Micronics' Resolver, and all work with DCTV (Digital Creations) and HAM-E (Black Belt) as well.

The three programs let you print directly; ImageFX and ADPro can even save in PostScript and En-

The original image (top) underwent somewhat revolutionary changes thanks to Imagemaster's Relief function (center) and ImageFX's Oil Transfer effect (bottom).

capsulated PostScript formats. Furthermore, each one creates text slides that you can save as IFF files.

If you need to create images from scratch or just do touch-ups, Imagemaster and ImageFX include full paint programs that are well integrated with the rest of the functions. Imagemaster's paint module has the most features, but the ImageFX offering most resembles a standard Amiga paint program and is simpler to use.

Of the program versions I reviewed, only ImageFX had built-in drivers for scanners. (Imagemaster's upgrade, which is due out by the time you read this, promises support for Epson's ES300, 600, and 800 units.) ImageFX's Sharp JX100 and Epson ES300C support is a generous bonus; in my tests the JX100 driver performed flawlessly. ASDG offers support for a much wider range of scanners, but at a higher cost. An ADPro driver module for Epson scanners is $200, and one for HP's ScanJet IIc is in the works. ASDG's Professional ScanLab II, which drives Sharp units, is $499.

Only ASDG offers separate products that support professional film recorders like Polaroid's CI-5000 and Lasergraphics' LFR. ASDG even sells ADPro modules that drive dye-sublimation printers and control Abekas digital-videotape recorders directly from the Amiga. Support for the Abekas is sure to be a crucial element in getting the Amiga into even more high-profile video post-production houses.

Standard equipment on ADPro are the programs Splitz and Joinz. If an image is too big to fit on a disk, you can use Splitz to break it into disk-size parts and Joinz to reassemble them. ADPro also includes IBM (DOS and Windows) and Mac versions of these two utilities so you can swap images with your friends on other platforms.

Finally, all three companies offer on-line technical support (via modem) to registered users.

WHAT'S RIGHT?

There are good *raisons d'être* for all three programs. Each is stronger in some way than its competitors, and each suits a different type of user.

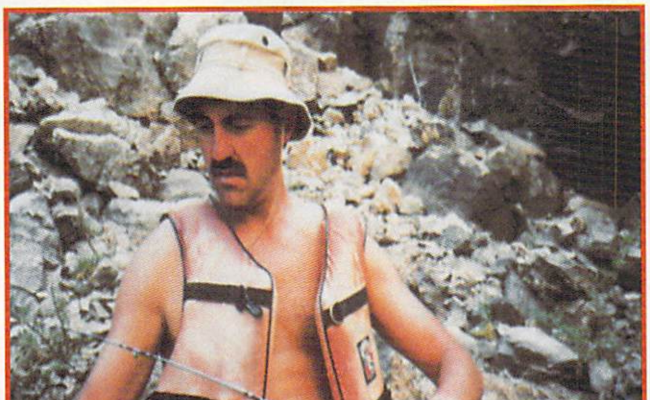
For the experimenter, the avant-garde artist who craves wilder and stranger special effects, I recommend Imagemaster. If you run a video boutique or post house you must buy this program. It excels when creating outrageous images, the type you see in music videos. Imagemaster does demand more from its users, but if you persevere it can outperform anything else. The exterior is an ugly duckling but the soul is solid gold.

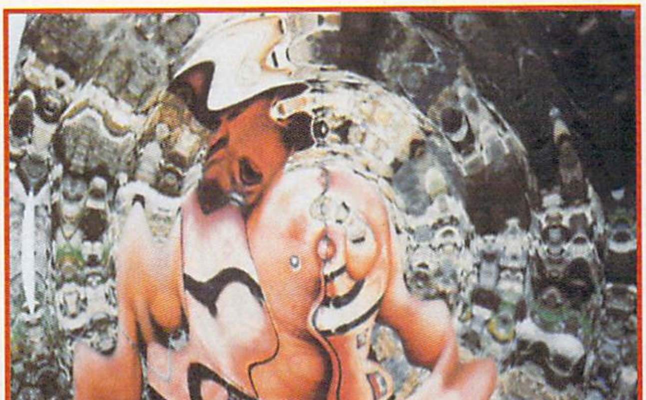
If you run a small studio and want an all-in-one solution with good value, then purchase ImageFX. I feel the program's Cinemorph module represents the most elegant morph solution of the three, and it's included here for free. Plus, you get a powerful 24-bit paint program, lots of effects, and built-in scanner support. It's easy to use and you can be up and running in minutes. It also offers the most natural interface. When I use ImageFX, I feel as though I am transforming the image, not just sitting back and letting the software do all the work. If a quick solution is what you need, you can't go wrong with ImageFX.

Despite the strengths of the other two programs, Art Department Professional is the strongest of the three. It gets the nod because it does what it claims to do. To its credit, ASDG has done the job right, supporting formats correctly and adhering to standards the others have only touched on. If you ever transfer files back and forth to other systems, you must have ADPro or risk ending up with egg on your face. ADPro is much more expensive when you factor in MorphPlus and the Professional Conversion Pack, but you do get what you pay for. It's a solid value, despite its premium price. You will find uses for all three programs, but ADPro is the one you will turn to in a pinch.

And hey, if your bank account can take the strain, get all three. Imagemaster has the flash, ImageFX has the range, and ADPro has the precision. As a trio they cover all the bases and then some. ■

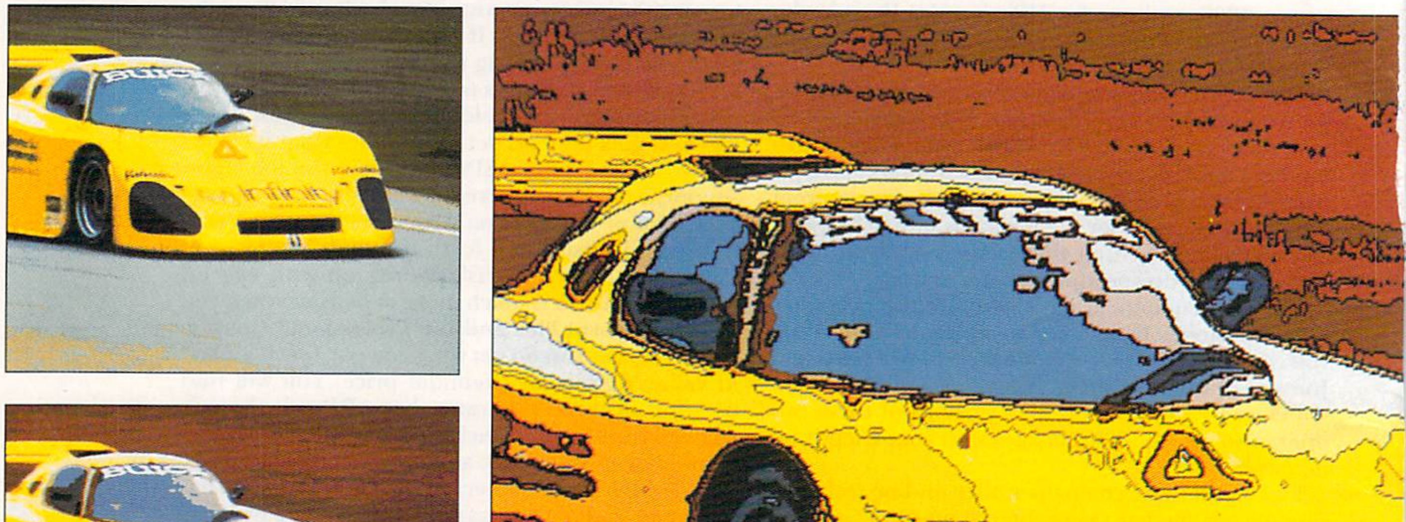
Derek Grime is president of Beyond Graphics, a Toronto-based animation studio that recently finished work for Fox, Froot Loops, 7UP, and Commodore.





Did the fisherman in the photo (left) catch a big one (right)? Sorry, Charlie, it's Imagemaster's Radical Wave effect. (Photo credit: Nancy Gefvert.)

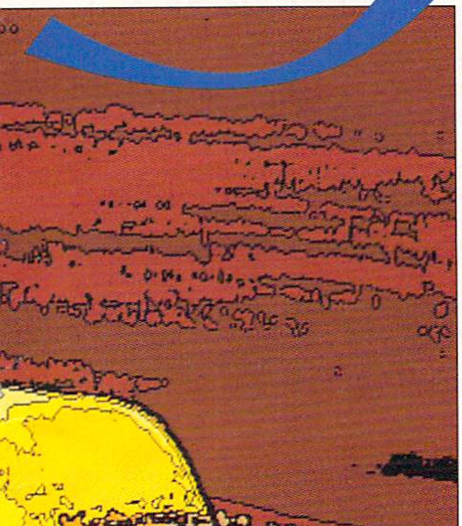
Graphics...



Outline Posterization: After the original color picture has been digitized (top left), posterize the image into fewer colors with flat color areas (middle left). Then, having created an outline version of the image (bottom left), composite the two images into the finished graphic (right). All operations for this example were done with Digi-View 4.0.

with *Flair!*

If you're looking for some slick, snappy-looking tricks to liven up plain-vanilla graphics, check out these image-processing techniques for creating outlined posterized graphics.



By Fred Hurteau

LIKE EVERY MAGICIAN, a computer artist needs a few tricks up his sleeve. Image processing offers some excellent opportunities for conjuring up such magic. The techniques presented in this article will show you how to perform some digital prestidigitation on an ordinary grabbed or digitized image and transform it into an outlined posterized graphic with artistic flair.

You've got a wide array of choices when it comes to finding the necessary tools to perform your magic. Any one of the following seven popular graphics and image-processing programs will do the trick: PIXmate (Progressive Peripherals), DeluxePaint (Electronic Arts), NewTek's Digi-View or Transfer 24 (provided with Digi-Paint 3), Art Department Professional (ASDG), ImageFX (GVP), and Imagemaster (Black Belt).

Our tutorial will take you through all seven programs, step by step, to demonstrate how each one produces its effects in different ways. So, no matter which one you choose to use, you'll know the trick to making it perform your bidding.

Before we begin, though, keep this in mind: Selecting a suitable subject for your magic is extremely important. Outline posterization works best on an image with large elements. Too many small details will confuse the issue. A close-up of one or two flowers works far better than a picture of the whole flower garden. Image sources might include a digitized photo or slide, a grabbed frame of videotape, or an image from a graphics-library disk. The technique works with images in any format—from 16-color to 24-bit—so the only limiting factor is whether your software is capable of ►

handling that particular format. (The chart in "The Great Manipulators" on p. 33 in this issue, lists all compatible image formats for ADPro, Imagemaster, and ImageFX.)

Posterizing

THE FIRST STEP is posterizing the image into fewer colors, introducing flat color areas with no dithering. HAM or 24-bit images should first be converted to 16 colors. Your completed image can later be used in a 24-bit program and still retain the posterized look. ADPro, ImageFX, Imagemaster, DeluxePaint IV AGA, and Digi-View 4.0 will load and convert 24-bit or HAM images, while DeluxePaint IV, PIXmate, Transfer 24, and earlier versions of Digi-View will convert HAM images only.

Digi-View or **Transfer 24** users should open the program in the screen size of the finished graphic. In the Control requester select the 16-color button and set Dithering to Off to enhance the posterizing effect of reducing colors. (The technique of not using dithering is one we will employ with all programs covered in this article—see Figure 1 for more details.) Load your 24-bit, HAM, 16- or 32-color image. For 24-bit images, start with contrast and brightness sliders set about –20. Click Display to see the effect. Adjust brightness and contrast as necessary for a good image. You can further reduce colors by using the slider in the Palette requester and then clicking Display. Save your posterized image to disk when done.

To use **ADPro**, load your image and set the Screen Controls buttons to the desired screen resolution and 16 colors. Set Dither to Off and render with the Execute button. Now save the 16-color image to disk.

With **Imagemaster**, this project becomes a multiple-choice test. To scale HAM images up to hi-res, choose Scale To New Size and then make the appropriate selection for hi-res under Set Render Size. (Be sure to select No Dither for Set Dither Type.) To posterize your image, go to the Process Panel, select Special Effects, and then click Posterize and Entire Image. Set the Poster Levels slider for 16 colors or less and click Done. You can achieve a similar posterization using Contour under Filters. Set the Contour Interval slider to about 125-150 and click Done. To save the image, click on File I/O and then on Render to File.

For **ImageFX**, load your image and resize it if necessary using the Size/Scale option. In the Render menu, set the left Dither Options button to None and the Display Options color button to 16. Render and save the "Rendered Image" to disk. You can further reduce colors by selecting Posterize from the Color menu, setting the slider to less than 16 colors. Render as before, making sure the Dither button is set to None, and save this "Rendered Image."

With **PIXmate**, load your HAM image and choose HAM To 32 from the Color menu. Then select Reformat As [640x400] under the Effects menu to obtain the desired posterized image. You can posterize any image using Less Colors in the Color menu. Be sure to save your image.

If you use **DeluxePaint**, open the program in the screen format of your image. Then load your image and select Screen Format from the Picture menu. Choose Hi-Res and 16 colors and click Okay. When the requester asks if you want the image stretched or shrunk to fit the page, select Yes. Now save this converted image.

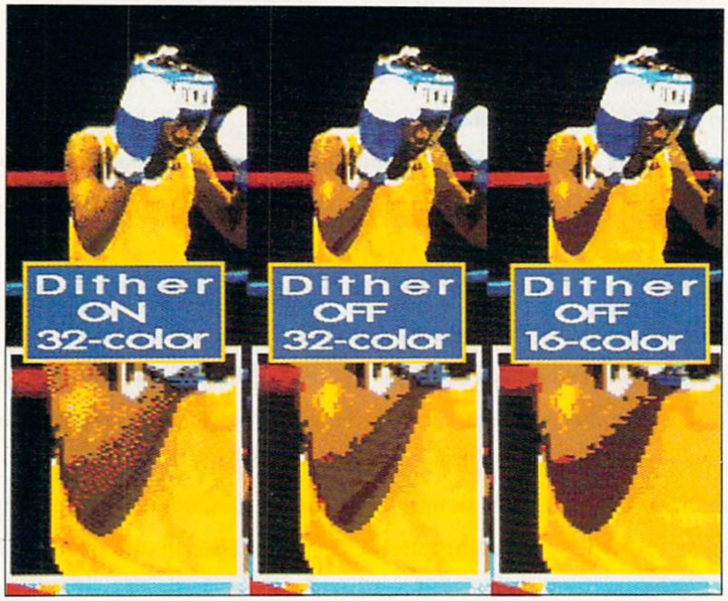


Figure 1. Differing degrees of posterization are achieved by turning off dithering when reducing the number of colors in an image. With dithering off, there are hard edges and more abrupt changes between areas of different color—as opposed to lots of dithered pixels simulating color and shade transitions when dithering is on. The overall effect is more like a drawing than a digitized image.

Outlining

AFTER POSTERIZATION, YOU need to make an outline version of the image, which may require gray-scaling first. Except for PIXmate and DeluxePaint, using the same program for gray-scaling and outlining after posterization requires saving and reloading the posterized image before continuing. If you don't, your program will use the original data still in memory, and you will lose your posterization effect. Because outlining in DeluxePaint is not automated, we'll cover that program last.

With the exception of Imagemaster's "Edge Line" option (which requires no compositing), after you create your outline version you must combine the posterized image and the outline image into the finished graphic. Some programs—ImageFX, ADPro, and the "Line Art" function in Imagemaster—provide for such compositing within the program, so we will examine their compositing methods as we discuss the outlining procedures for each of those programs. For the other programs (or if you decide you do not want to use the more complex compositing functions in ImageFX and ADPro), you will need to use the compositing procedure that is described in the section on DeluxePaint.

Before we move on to the specific procedures for outlining with each program, however, be aware that each one handles outlining in its own unique way and therefore each is capable of producing very different kinds of outline effects. Figure 2, a composite of three

different outline images of the same original, provides a graphic representation of this point.

PIXMATE: EDGE DETECTION

Load your posterized image and convert it to gray scale using Color Bias in the Color menu. Pull the S slider (saturation) all the way down and click Use. Then adjust the C (contrast) and I (intensity or brightness) sliders for a good image. Click Use after each adjustment. Don't over-adjust because you may lose the very parts of the picture you want outlined. Save this gray-scale image to disk in case you mess up in the next step. Do not overwrite the original posterized color image.

Next convert this gray scale to line art by selecting Image Process under Effects. Practically every button here will alter the edging process, allowing for an infinite variety of looks. For this project, set the Threshold slider to 0, the Limit slider to 16, and the Hits slider to 100%. The NOP (No Operation) box should be highlighted in the Logic section.

Under the word "KERNAL" there are seven characters, ranging from an asterisk to a slash mark. All of these effect edging, but use + (plus sign) as a starting point. Click the EDG box (edge detection) and PIXmate goes to work. When the light show is over you will have a black image with white outlines. For black outlines and white background select Compliment in the Color menu for a negative image. (Note: All the programs covered here provide in one fashion or another for a choice of outline color—black on white or vice versa—see Figure 3 for an example of both.) The Color Bias adjustments will increase contrast and darken grayed lines to black if desired before you save the outline image to disk. It's okay to leave some grays in the image; you can adjust them later with DeluxePaint when you assemble the posterized and outline images into a finished graphic.

IMAGEFX: EDGE DETECTION

Load your posterized image. In the Toolbox menu click Color and select Color To Gray, choosing the weighting you desire. Then click Okay. Once the image has been processed, render it with dithering set to None as before, and save the "Rendered Image." Now select Convolve and click Edge Detect. Try a setting of 30 on the Threshold slider and click Okay. If you don't like the results, the Undo button will restore your image. The Balance button allows adjustment of contrast (the Co slider) and brightness (the V slider). Using these and various Threshold settings will provide full control. You can try adjusting contrast and brightness *after* the edge detection is done to thicken faint gray lines into good black outlines. If you want white outlines, selecting Color and then Negative will reverse colors. Render and save the "Rendered Image."

Compositing this image with ImageFX can be a complex process, and less experienced users may wish to defer to DeluxePaint. If you do want to proceed, follow these steps: With the outline image still visible, go to Palette, click on Pick, and then click on the white background in the image. If the RGB sliders show R=255, G=255, and B=255, you're okay. If not, reprocess the image with more contrast until the background is pure white. When this is accomplished, click Color and then Gray To Color. If you don't do this, the compositing will not work properly. Now copy the image to the swap buffer and load the color posterized image. Selecting Swap Buffers will allow you to view the outlined image again.

Now go to Palette, click on the whitest white in the palette, select Pick, and click on the image's white background. The RGB sliders for this color should read R=255, G=255, and B=255. Click the ranges or the All button until it reads R1. Make this white color in the palette a one-color range for R1. If this is done ►

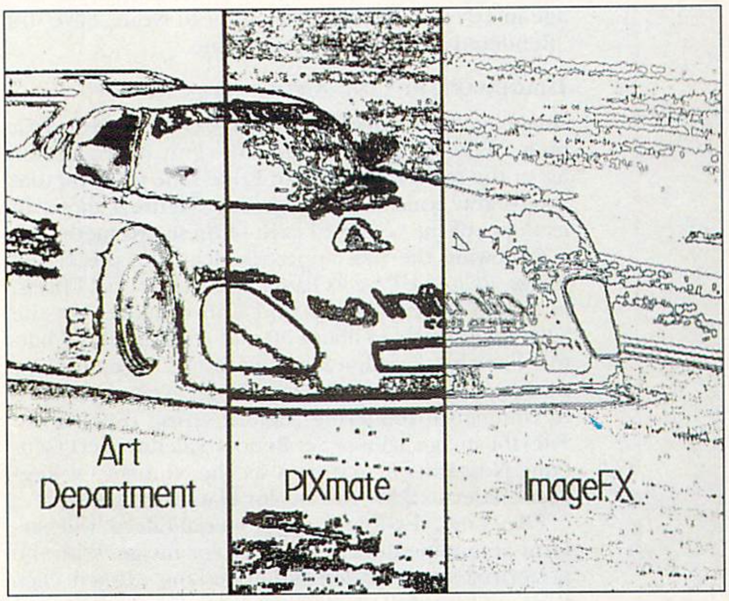


Figure 2. A composite of three outline images generated from the same original color picture of the race car from the opening illustration. Note how each program produces very different outline effects. You can also vary these effects within a single program depending on the settings for contrast, brightness, and other variables that you choose.

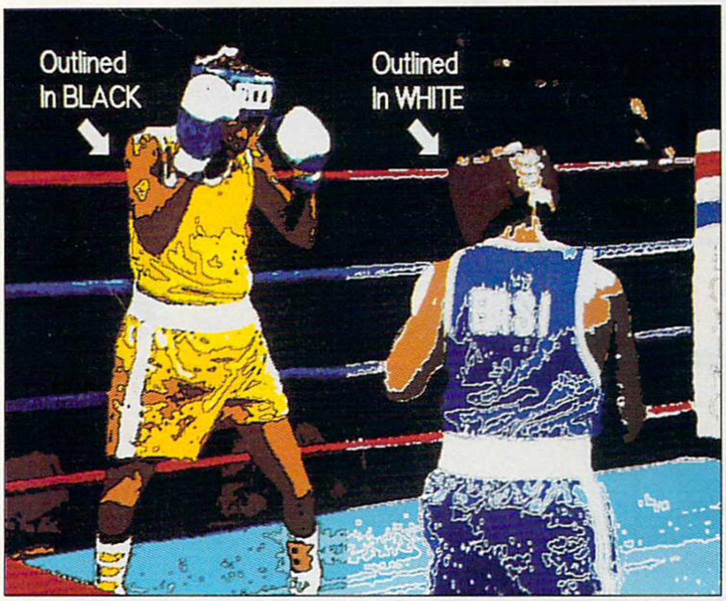


Figure 3. You can produce your finished image with either black outlines or white outlines, depending on the darkness or lightness of the color image.

properly, the white palette color will have a dash across it. If you have white outlines, substitute the black background color for the above operations and adjust values accordingly (R=0, G=0, B=0).

Go back to the Toolbox, click Composite, and select Matte. Using the Transparency controls, set the Include button for R1, the Exclude button for None, the Closeness slider for about 200 to 230, and then click Merge. Set the Merge Percentage slider for 100% and click Okay. When the merge is done, render the image in 16 colors with dithering set to None. Save the "Rendered Image" and you're done.

Imagemaster: Line-Art Conversion

Imagemaster again offers multiple choices, providing both a Line Art function that does gray scale and line art at the same time, and an Edge Line function that avoids gray scale and compositing. Figure 4 shows an example of the results of each of these two methods.

Following the first approach, load the posterized image, go to the Process Panel and click Special Effects, and then select Line Art and Entire Image. Set the Threshold slider to about 50 and click the B&W button. For a black outline click the Black Line button; for a white outline leave this button off. Now click Done to commence rendering. Before saving (Render To File) the image, choose Set Render Palette, select Generate New Palette, and then set the Number Of Registers slider to 2 for a two-color black-and-white file.

Edge Line, also found under Special Effects, will perform an outline directly on the color image. With the posterized image loaded and Edge Line selected, click B&W and try slider settings of Edge Line at 75% and Threshold at 20. The Black Line button functions the same as above. Click Done to render and save your image. That's all: No further compositing is required.

If you used the Line Art function above, Imagemaster can composite the images. Load the posterized image first, and then load the outline image—selecting New As Secondary when the requester pops up. In the Compose Panel, choose Color Keyed Compositions and then Keyed Sec Max Rub Thru. Set the Red, Green, and Blue sliders all at 255 for a white background (black outlines), or all at 0 for a black background (white outlines). Set the Var slider at 20. Click Done and Entire Image. Be sure to choose Generate New Palette under Set Render Palette before rendering to disk (saving) the composited image.

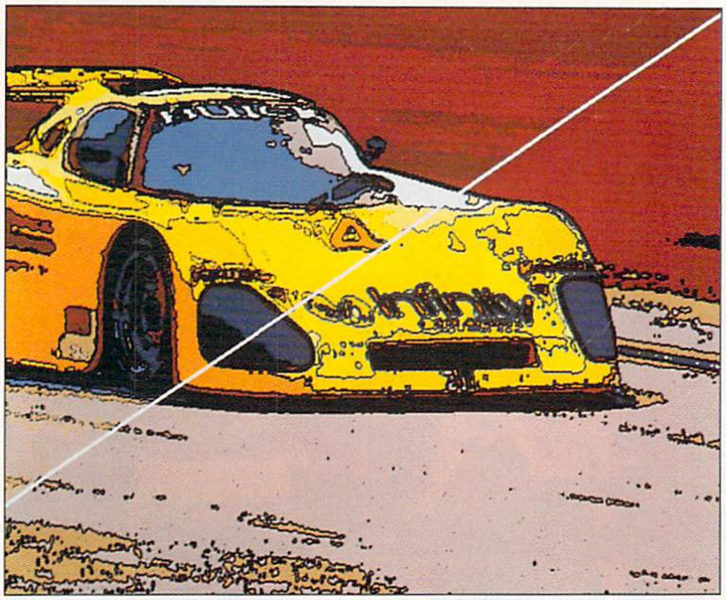


Figure 4. Imagemaster offers two distinctly different outlining approaches: The top-left area was done with Posterize, Line Art, and compositing; the lower right with Contour and Edge Line, which requires no compositing.

ADPro: Line-Art Operations

Load your posterized image and set the Dither button to Off. Execute the Color_To_Gray operator for grayscale conversion. Set the Screen Controls to the screen format of your finished picture, and the Color button to 16. Click on Execute to render the image to screen. If you need contrast or brightness adjustments, use the Balancing controls. Don't forget to use the Apply Map operator afterwards to make the new settings take effect. Render and save the color image (not the 24-bit image) to disk, and then reload it. This forces ADPro to work from the processed image, not the original image data.

Now select the Line Art operator and Execute Op. Render the outline image to screen. Again, you may want to adjust contrast or brightness to eliminate gray lines or make them darker. An optional way to eliminate grays is to set the Screen Controls Color box for two colors and rerender as a two-color image. Save your color image to disk for compositing next.

Be aware that ADPro's Line Art operator makes the image two pixels smaller vertically and horizontally, so care must be taken to properly align the images in the combining step. As with ImageFX, less experienced users will find that this type of compositing is simpler with DeluxePaint.

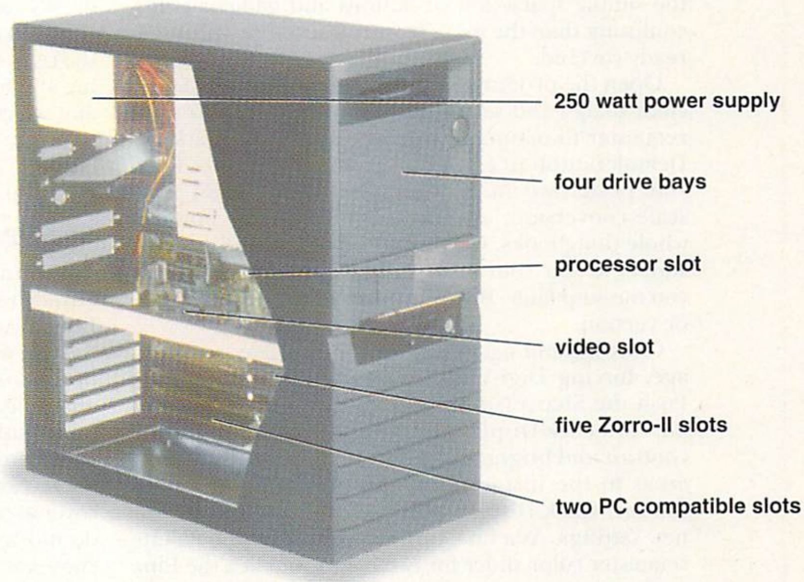
For ADPro to properly composite this project at all, you must load and resave the outline image through DeluxePaint. While in DeluxePaint, check the palette and set the background to pure white (all RGB sliders at 15) and the outline to pure black (RGB = 0), or vice versa. Now save this image over the original outline file. Return to ADPro and load the color posterized image first. Then click the Replc (replace) button, changing it to Comp (compositing), and load the outline image. The Composition Control requester will appear.

You must adjust the Offset X and Offset Y boxes to properly align the images. The amount of adjustment can vary depending on original image size and the available sizes within DeluxePaint. Usually an offset of 2 for both X and Y is correct. Set the Mix box to 100. At this point, the R, G, and B boxes will probably read –1. Delete these and type 255 in all three boxes, making the pure white background transparent during compositing. If you are using white outlines and black background, set the R, G, and B boxes to 0 and click on OK. The outline image will be loaded and composited with the color image. Render this composited image to screen. If the outline and color areas are not properly aligned, recomposite the two images with the Offset X and Offset Y adjusted to compensate for the shift you now see. When done, save the color image.

Digi-View/Transfer 24: Outline Art

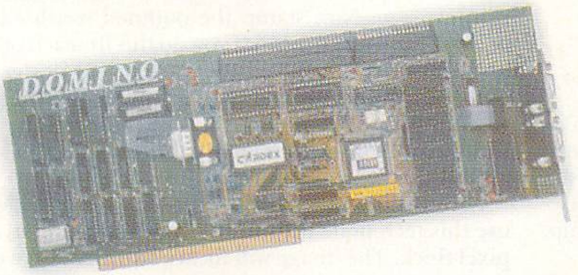
This is my favorite method for outlining. I can stop the ►

TIME TO GET SERIOUS.



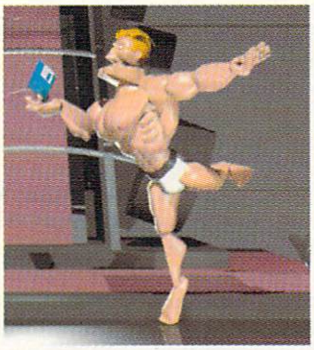
SHUTTLE 2000 TOWER

The Shuttle Tower, manufactured by Eagle, transforms your Amiga 500 into a professional powerhouse. Four Zorro-II expansion slots, two PC compatible slots, video slot and processor slot make this great looking black (or beige) casing and detachable keyboard the piece of Amiga hardware every Amiga 500 owner has been waiting for. Together with the heavy duty power supply and four drive bays, you can now take advantage of all the upgrade possibilities offered to other Amiga users. The Shuttle Tower makes your Amiga a professional tool.



DOMINO

For those who want thousands of colors at an affordable price, Domino is just the board. With 32,000 colors, and a maximum resolution of 1024 x 768, this board is a real bargain. To make it even more attractive, every Domino board comes with free TV-Paint Jr., a 24-bit color drawing package with professional features, and the workbench emulator which will let you run your Amiga workbench and virtually all software in resolutions up to 1024 x 768. (De-interlacer required)



CYCLEMUSCLES

Put some muscle in your rendering with two cycle-objects. For use with Imagine, two realistically detailed objects come with a walk- and run cycle, and can be used freely in all your commercial projects. Just to keep them in shape, we've thrown in some dumbell objects.



FLink

FLink, the fastest AmigaDOS object file linker available today. FLink is a must for those who take programming seriously. FLink is compatible with any programming lanuage that produces an AmigaDOS linkable file, and gives you linking times, independent of program size, of less than a second.

For more information, contact your nearest Amiga dealer or call Spectronics at 217 352-0061

Dealer inquiries welcome

SPECTRONICS
World Class Marketing

Spectronics International USA Inc. 34 E. Main St. Suite 23 Champaign IL 61820 **tel** 217 352-0061 **fax** 217 352-0063

Circle 153 on Reader Service card.

process at any point with a mouse click and try different settings without undoing or reloading, making experimentation quick and easy. Novice users will find the simple sparseness of buttons and gadgets is less confusing than the more feature-packed programs already covered.

Open the program in the screen resolution of your color image and set Dithering to Off in the Control requester to maintain the posterized look. Click the Default button to ensure all sliders are at zero. Load your posterized image, select the BW button for gray-scale conversion, and click Display to see how the whole thing looks. Adjust the brightness and contrast sliders to suit your taste and save the image in case you mess up later. Be sure you don't overwrite the color version.

Click Default again and reload the gray-scale image, forcing Digi-View to use the new image data. Push the Sharp (sharpness) slider all the way up to 48. Now click Display and view the result. Adjust the contrast and brightness sliders to help eliminate gray areas in the image. This may also make the lines thicker. Click Display with each change to test your new settings. As a final option you can set the Palette requester color slider for two colors, or click the Line Art button for a two-color image. Save this outline art to disk.

DeluxePaint: Compositing . . . and More

DELUXEPAINT WILL EASILY assemble the color and outline images into the finished product. Experienced DeluxePaint users can find two or three ways to accomplish every step in this assembly process. Because some users may not have a one-meg Agnus chip, we'll use the most memory-efficient method.

Open DeluxePaint in the screen format of your color image. Load the black-and-white outline image first. If the message "Do you want to change format to that of file?" appears, click No. If the image contains grays, go to the the Stencil requester, click on the darker gray shades you wish to keep, and click Make Stencil. Select the brightest white (R=15, G=15, B=15) in the palette below your Tools menu as the current background color by clicking on it with the right mouse button. Now clear the screen. The light grays will be cleared to white, but the dark grays and black locked with the Stencil remain. If too many lines disappear, select Undo, lock some additional lighter grays in the Stencil requester, and try it again.

When the desired light shades have all been changed to white, go to the Stencil requester, click Invert, and then click Make Stencil. This will lock the light shades. Select pure black (R=0, G=0, B=0) as the current background color and clear the screen again. You now have a pure black-and-white outline image. Be sure to turn off Stencil when done.

To combine the images, go to the spare screen and load the color posterized image. Go back to the main screen and check the outline image. If the outline color has changed, you should apply Stencil to all colors except the outline color. Select black (or white as desired) from the palette and draw a solid rectangle over the entire screen. This will paint the outlines and not affect any other color on the screen. Again, turn off Stencil.

If the background has changed to some other color, it's okay. Simply make white, or whatever color it changed to, your current background color by clicking the right mouse button on it as before. While still looking at the outline image screen, go to the Picture menu and select the Spare/Merge In Back submenu. The color image on the spare screen will merge in place of the background color, leaving the outlines over the image. Now you have the completed graphic.

BUT DPAINT DOES IT, TOO!

As you can see, compositing with DeluxePaint is easy. Earlier we converted and posterized the image with DeluxePaint, but that's not all the program can do. Although we've used several relatively complex image-processing programs to perform edge detection or outlining, DeluxePaint III, IV, or AGA will give you the same outline effects. Here's how.

Once the image has been posterized with DeluxePaint, carefully choose a few colors in the image that cover areas you want outlined (five to eight colors will do nicely). Now Stencil all colors except one of your chosen colors and pick up the whole screen as a rectangular brush. Turn off the Stencil, select black or white as the current brush color, and press the o key twice. This puts a two-pixel-wide outline around the brush image. Now stamp the outlined brush exactly back where it came from. If you do this for each of your chosen colors, you will have a complete posterized, outlined graphic without having to do gray-scaling or compositing. The only drawback to this method is that picking up a whole screen as a brush eats up a lot of chip RAM.

One important caveat here for video buffs: Never use this technique for video if you have outlines one-pixel thick. The image will flicker like crazy on a composite monitor and look extremely unprofessional. Take time to thicken the outlines before (or after) merging them with the color image. Using DeluxePaint, either pick up the lines as a brush without background or use Stencil to exclude the other tools. Use the o key or stamp the outlines back down shifted one pixel vertically, horizontally, or both.

Following the steps outlined here (no pun intended), you can produce this technique both with a variety of trusty old standbys or with some less familiar but high-powered new image-processing programs. The only real expertise required lies in selecting a good image to work with. The rest is simply taking advantage of the wonderful graphics software available for the Amiga. And we haven't used up all the magic by any means. There are many more interesting, striking effects you can try with these programs. It just requires experimentation. I hope this article has given you the courage to delve deeper into the graphics magic of the Amiga. ■

Fred Hurteau spent 12 years as a commercial artist prior to opening an Amiga-based video and graphics studio where he produces corporate, educational, and commercial materials, including training videos for Amiga products and techniques. He teaches Amiga graphics and animation classes at Pembroke State University in North Carolina.

The *AW* Amiga Fonts

BUYER'S GUIDE

PART 1

DTP FONTS

WHILE THE AMIGA is recognized as the leading video/multimedia platform in the desktop field, its capabilities for producing text and graphics for high-quality printed documents are much less well known. Although it still does not enjoy the reputation of the Mac and MS-DOS platforms, the Amiga has recently been making significant headway as a serious desktop-publishing (DTP) tool.

Some of this new-found publishing strength stems from improved font-handling routines in the new releases (2.0, 2.1, and 3.0) of AmigaDOS, as well as from improvements and new additions to the stable of Amiga DTP software. But a lion's share of the credit must go the tremendous growth in the number of high-quality fonts now available for use with the Amiga.

One of the essential components in a finished document is the quality of the typesetting. Printed text is much less forgiving than video titling, requiring much higher resolution, better quality letterform design, more graceful letter and word spacing, and careful design and placement of the text and graphic elements on the page. In the early days, the Amiga was equipped with only fairly coarse bitmapped fonts, which were not suitable for quality typesetting. Things have changed dramatically, however, and today's Amiga users enjoy a wide range of options for creating professional-quality typeset documents.

In Part 1 of our buyer's guide, we will focus on so-called "structured" (or "outline") fonts, which have been specifically designed to give smooth, jaggie-free output. Bitmapped fonts, so useful for video production, will be covered next month in Part 2.

A Word About Standards

Someone once said, "The nice thing about standards is that there are so many to choose from!" Whether you're using an Amiga, a Mac, or an MS-DOS-compatible computer, one thing that becomes clear very quickly is that there are a lot of nonstandard "standards" among outline fonts. All outline fonts are similar in that they consist of letter shapes made from mathematically defined lines and curves, but different developers have attempted to establish competing, proprietary (and often incompatible) formats. All of these outline fonts, however, are a bit like electronic rubber: The basic letter form can be stretched to a variety of sizes and still print out smoothly, and depending on the program with which it is used, structured text can be rotated, squeezed, twisted, and manipulated in a wide variety of ways.

There are two main kinds of outline fonts, originally developed for MS-DOS and Mac systems and now available on the Amiga. These are Agfa Compugraphic Intellifonts and Adobe Type 1 PostScript fonts. In addition, three very good and very popular Amiga programs, Final Copy (Softwood), Saxon Publisher (Saxon Industries), and PageStream (Soft-Logik), each offer their own proprietary structured-font formats. There are a number of other structured font formats ►

BY JEFF EVANS

available on other computer platforms (including Type 3 PostScript, Bitstream, and TrueType). While some of these can be converted into an Amiga-usable form (see "The ABCs of Amiga Fonts," p. 51, in last month's issue), they are not used all that often on the Amiga. For now, we'll concentrate on the two major and three minor structured-font formats with which virtually all serious Amiga DTP is currently being done.

What follows in the remainder of this article is designed to help you in two ways: The rest of the main text will explain the different approaches taken by each of the developers of the various structured-font formats—with an eye towards showing you what each has to offer (or not offer) for your type and printing needs. The "Mini-Buyer's Guide" sidebar will present specific type collections available in these formats—plus several font-conversion utilities you may find useful.

GOLD DISK STRIKES FIRST: COMPUGRAPHIC INTELLIFONTS

Until now, most Amiga DTP fonts have been created on other computer platforms and then converted into an Amiga-usable format. When ***Gold Disk*** introduced the **Professional Page** (current version 4.0, $295) DTP program in 1987, Pro Page used only bitmapped screen fonts and metric tables that it had licensed from Adobe, the creator of the PostScript page-description language. Without actual Amiga-format versions of the fonts, Pro Page users were limited to creating a rough approximation of the text on their Amiga monitor screens, and then getting a printout by sending instructions from the Amiga to the output device (a PostScript-compatible laser printer or Linotron typesetting machine). The actual structured Adobe fonts were resident on the printer, not the Amiga.

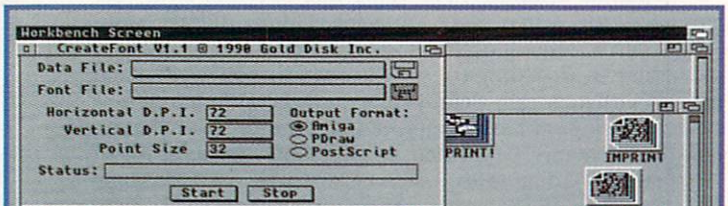
This was okay if you were satisfied with the 35 PostScript fonts that were installed on ROM chips on most PostScript laster printers. If you wanted to use any other fonts, however, you had to buy them in Mac- or MS-DOS-disk format, download them from a Mac or an MS-DOS computer to the printer's memory, and then print your Amiga document—in effect, requiring you to have a second computer hooked up to the printer.

Gold Disk got around this problem in late 1988 by licensing Agfa Compugraphic's "Intellifont" technology, which offered any number of advantages. First, because the fonts were actually converted to Amiga-disk format, they could be loaded onto the Amiga and then downloaded to the printer along with the document. That meant you no longer needed a Mac or an MS-DOS computer (or bridgeboard). Also, rather than using an inaccurate, coarse bitmapped version of the font, Intellitype fonts actually "printed" the letterform to the Amiga monitor screen, as well as to the printer, giving you a much more accurate WYSIWYG (What You See Is What You Get) display, than the older style Adobe screen fonts.

In addition, Gold Disk developed a font-conversion utility that allowed users of Amiga Intellitype fonts to convert the basic typesetting fonts into **Professional Draw** (current version 3.0, $199.95) format (to allow users to do such sophisticated text effects as bending and warping), as well as to convert the structured fonts into Amiga bitmapped format for use in video or paint programs. Not only that, the Intellifont structured fonts could also be output to dot-matrix or inkjet printers to the maximum resolution of those devices. This meant that cheap non-PostScript printers could be used for proofing, or even for final output if quality requirements were modest.

One limitation of the original Gold Disk Intellifont offering was the limited number of fonts in Amiga format. Gold Disk has continued to license additional fonts, so that it now provides a reasonably good basic assortment of more than 180 fonts; the company states that it will add additional typefaces to its library "as demand warrants."

Commodore picked up on the benefits of the Compugraphic Intellifont technology and included it as a part of the AmigaDOS 2.0 operating system. Most 2.0-compatible programs, such as the current version of Electronic Arts' DeluxePaint, support bitmapped versions of Intellifonts. With 2.0's Fountain program, you can make bitmapped versions of any Compugraphic font—in user-selectable sizes. AmigaDOS supports PostScript output directly through the PrinterPS program in AmigaDOS 2.1 and above. PrinterPS offers a fairly wide range of output options, although there have been some incompatibility problems, especially with older Amiga programs, as well as bugs with the PrinterPS program itself. (For more on the new font-handling improvements to release 2 of AmigaDOS, see Parts 4 and 5 of the series "Digging in to DOS," Feb. '93, p. 55, and Mar. '93, p. 65, respectively.)



Gold Disk's Pro Page allows users to take dozens of Compugraphic Intellifont faces and convert them to Pro Draw, downloadable PostScript, or Amiga Bitmap formats.

SOFT-LOGIK: POSTSCRIPT ... AND A WHOLE LOT MORE

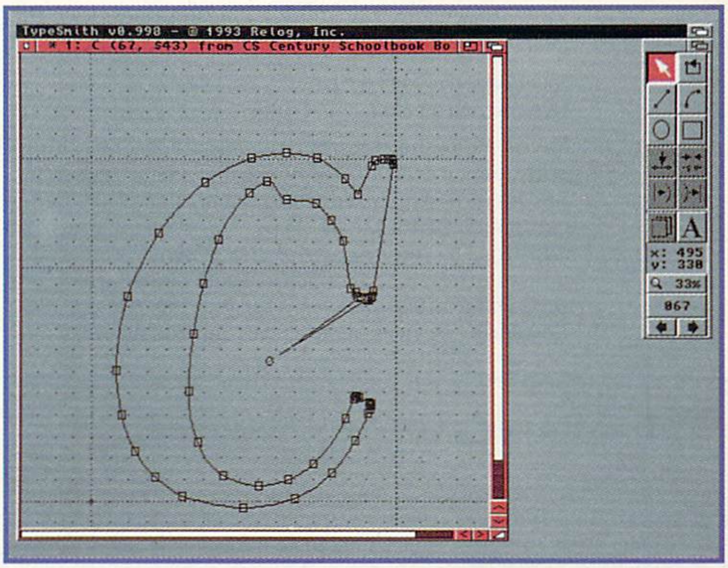
Soft-Logik, the publishers of **PageStream** (current version 2.2, $299.95), initially had some problems with the bugginess of early Amiga versions of its software. This limited PageStream's acceptance among professional Amiga desktop publishers for a while, in spite of its extensive list of high-end typesetting features. However,

in the course of making PageStream more robust, Soft-Logik also included even more extensive font options than are to be found in Gold Disk's Professional Page program.

Currently, PageStream offers its own proprietary structured-font format, plus compatibility with Adobe Type 1 and Type 3 PostScript fonts, as well as with Compugraphic fonts. In addition, Soft-Logik provides a vast assortment of PostScript fonts in Amiga-disk format. In terms of font selection and typographic control options, PageStream is unquestionably the leading Amiga DTP program, and it compares quite favorably with publishing software on other platforms.

Recently, Soft-Logik released **Art Expression** ($249), a direct competitor to Gold Disk's Professional Draw structured-illustration and text-manipulation program. It is compatible with Type 1 PostScript fonts (MS-DOS format only), which means that thousands of fonts are available for use with it. (For a complete review of Art Expression, see Apr. '93, p. 28.)

Even more recently, Soft-Logik has done a great favor to the Amiga desktop-publishing community by announcing the imminent release of the first full-featured professional Amiga outline-font editor. **TypeSmith** ($199.95) will allow users to create outline



Soft-Logik's forthcomimg TypeSmith program allows users to create new outline fonts from scratch or [as pictured above] to modify existing ones.

Mini-Buyer's Guide to Amiga

DTP Fonts and Font Utilities

WHILE THE FOLLOWING is not a complete list of what's available in the way of structured fonts and font utilities for Amiga DTP, it does include most of the more commonly available commercial products. In addition to the fonts already available in Amiga-disk format, the font-conversion utilities listed at the end of the guide will enable you to convert many of the more than 27,000 PostScript fonts available on Mac and MS-DOS platforms into Amiga format.

FONT COLLECTIONS

Gold Disk Type
CG Outline Fonts
Gold Disk

Gold Disk supplies several font libraries in Agfa Compugraphic Intellifont format. As well as the approximately 60 fonts that are available in these sets from your Amiga dealer, Gold Disk sells directly several dozen other typefaces "on request." Using the included CreateFont utility, you can take the basic Intellifont format and convert it to Professional Draw, downloadable PostScript, and Amiga Bitmap formats.

The Agfa fonts install easily and provide very accurate and detailed screen displays, generally good dot-matrix printer output, and excellent high-resolution PostScript output. The Intellifont format is also supported directly by AmigaDOS 2.0 and higher. The only drawback to the Intellifont format is that it isn't the industry "standard" for outline fonts (effectively, Adobe Type 1 is the closest thing to a standard there is). There are only a couple of hundred fonts available in Agfa format, and while the offerings are of excellent technical quality and cover the most commonly used typefaces, the selection is not increasing rapidly. ►

TYPE:

CG Century Schoolbook

CG: Futura Bold

CG TIMES ROMAN

Examples of some standard Agfa Compugraphic Intellifonts from Gold Disk, developer of Pro Page DTP software.

fonts from scratch or modify existing ones. (See the "Mini-Buyer's Guide" for more on TypeSmith.)

Saxon and Softwood: Strong Supporting Roles

Saxon Publisher (current version 1.2, $299), an unfairly obscure DTP program from ***Saxon Industries***, has its own structured-font format, as well as being compatible with Adobe Type 1 PostScript fonts. In addition, Saxon Industries has recently released a unique program, SaxonScript Professional, which is a powerful PostScript interpreter that lets you use non-PostScript devices such as dot-matrix printers and non-PostScript laser printers as though they were full-fledged PostScript printers. The company also claims that the program supports a wide range of PostScript fonts, and offers a sizable array of font-conversion options. (See the "Mini-Buyer's Guide" for more on SaxonScript.)

SoftWood's **Final Copy II** ($99.95) word-processing software provides the last and perhaps the most independent-minded of all the font offerings described here. Final Copy II has its own structured-font format, with Softwood including a decent range of fonts with the program, as well as selling additional packages of fonts on request. One of the principal advantages of

Mini-Buyer's Guide (continued)

It would have been better for Amiga DTP users if Gold Disk (and Commodore) had settled on Adobe Type 1 fonts as the standard, but for various historical reasons, this opportunity was passed up in 1985, when, unlike Apple, Commodore declined to invest in Adobe technology.

One serious weakness of Gold Disk's handling of the whole font issue is that its Font Manager conversion utility (which is provided as part of Professional Page 4.0, PageSetter 3, and Professional Draw 3.0, and is supposed to be able to convert Adobe Type 1 fonts into formats usable in the various Gold Disk DTP programs) simply doesn't work very well—either simply refusing to work or hanging up and "Zzzz-ing" indefinitely. It failed to convert most Adobe Type 1 fonts that I tried it with. Gold Disk tech support simply suggested that the fonts I was trying to convert "weren't standard Type 1 format." These same fonts, however, all worked fine with PageStream.

Prices for Gold Disk font packages range from $36 for a single family, to $60 for a set of three decorative display fonts, to $199 for a set of the basic 35 fonts commonly found on PostScript laser printers.

Newsletter Font Pack
Starter Font Pack
Classic Font Pack
Designer Font Pack
Soft-Logik



A wide variety of Adobe Type 1 PostScript fonts are now available to Amiga desktop publishers. [From Allied Studios' Pro Stream Plus collection.]

Through an arrangement with Image Club, a major vendor of PostScript fonts, Soft-Logik sells a vast assortment of good quality PostScript fonts (more than 200 currently listed) and structured clip-art in Amiga-disk format. These fonts work very well with the company's PageStream and Art Expression programs. They can also be imported into Soft-Logik's new TypeSmith font editing/design program for specialized modification. In addition, they can be converted into Pro Page or Pro Draw formats using Mirror Image's MIFont and MIOutline utilities, respectively (see "Font Utilities" below).

Prices for the Soft-Logik Library collections are: Starter Fonts and Newsletter Fonts, $99.95 each (eight fonts per set); Classic Fonts and Designer Fonts, $199.95 each (16 fonts per set).

ProStream Plus
Western Fonts
Fancy Fonts
Condensed Fonts
Allied Studios

The ProStream Plus collection of 70 Type 1 PostScript fonts is the class act of third-party DTP font offerings for the Amiga. A labor of love, these fonts show obvious evidence of great care and hard work in every aspect. They were also a breeze to install (ProStream Plus was the only piece of software reviewed for this article that was entirely idiot-proof—an extremely important feature for any software this reviewer has to learn) and the fonts worked perfectly. The package includes two separate versions of all fonts: one for Professional Page and one for PageStream. This overcomes the usual problem of ProPage's notorious finickyness about non-Intellifont typefaces.

Numbered among the 70 fonts included are some of the best of the public-domain/shareware display typefaces available,

Final Copy II's font system is that it seems very fast, especially on Amigas with slower processors. For a word processor, Final Copy II has very powerful page-layout and graphics-handling features, and fairly comprehensive PostScript output capabilities. For many users whose needs fall short of high-end commercial typesetting requirements, Final Copy II offers all the DTP power you will likely need. (For a complete review of Final Copy II, see Feb. '93, p.74.)

The rapid progress in the development of Amiga fonts has meant that Amiga DTP users now enjoy font options comparable to those available on any other computer platform. Ranging from the sophistication of PageStream and Professional Page (and their associated illustration programs) to the simplicity, speed, and economy of Final Copy II, there is a comprehensive array of fonts and page-makeup tools that can handle the full range of professional typesetting and illustration needs. ■

*Jeff Evans co-founded Canada's first microcomputer-based typesetting company in 1984, and has used the Amiga for animation and design since 1985. He teaches in Toronto, edits **Liquid Image Multimedia** magazine, and is a writer for TV Ontario's **Prisoners of Gravity** sci-fi series.*

and publisher Lion Kuntz includes acknowledgements of the creators of each of the faces. Kuntz, one of the pioneer Amiga type designers, did some of the first decent Amiga bitmapped fonts back around 1986–1987, and he continues to render a great service to Amiga users. While the program's excellent install routine is installing your fonts for you, you can sit back and peruse the included ReadMe file in which Kuntz makes some very pertinent editorial comments on current issues and problems relating to Amiga font technology and DTP generally.

With a retail price of $70, ProStream Plus is a definite bargain.

Kuntz also publishes Western Fonts, Fancy Fonts, and Condensed Fonts—PostScript packages containing 16, 14, and 19 fonts, respectively. The Condensed set was not available for review at the time of this writing, but should be shipping by publication time. Western and Fancy Fonts ($30 each) both feature attractive display fonts that are fun to use. If you need high-quality decorative faces at a low cost, these packages are a good choice.

Kuntz will also convert any of the 27,000 available PostScript and TrueType fonts into Amiga format on an "as requested" custom basis, and, if you wish, he will also add custom logos to your fonts for a fee.

Fontmania

80 Track Software
distributed by InSync Digital Corp.

The largest collection of Amiga Adobe Type 1 fonts (300 in all), Fontmania is a vast 15-disk set of public-domain offerings. The fonts are not as easy to install on Professional Page as Allied Studios' ProStream are, but they do install quite nicely on PageStream and Saxon Publisher. At $84.95, Fontmania represents an excellent value and should also silence anyone who still claims that "there aren't any PostScript fonts for the Amiga."

PageStream Fonts

Dennis Palumbo

Type designer Dennis Palumbo has created an excellent series of high-quality outline fonts compatible with PageStream's proprietary font format. (Please note that only Disks 1 and 2 of this five-disk set were evaluated for this article.) They installed easily and worked perfectly. The fonts provided excellent dot-matrix, as well as PostScipt, output.

With the release of Disk 5, Palumbo intends to convert all the fonts to Adobe Type 1 format, which would make them easily convertible—via utilities such as MIFont and MIOutline—to Pro Page and Pro Draw formats, respectively.

Priced at $34.95 each, all disks come with three fonts, and there is a discount of 30% if you purchase the complete five-disk set.

FONT UTILITIES

MIFont
MIOutline

Mirror Image Productions

MIFont and MIOutline comprise a set of excellent utilities for converting PostScript fonts into formats usable with Professional Page and Professional Draw, respectively. Unlike Gold Disk's Font Manager, which is supposed to do the same thing, these utilities are robust and reliable.

I found the MIOutline program indispensable for adding to my library of available fonts for Pro Draw. Installing and using both programs are easy, and each performed exactly as billed. Prices: MIFont—$105; MIOutline—$125.

SaxonScript Professional

Saxon Industries

Released just recently, this utility should prove very valuable as a handy PostScript interpreter and conversion program (although the early version that I used was somewhat difficult to install). Supporting virtually every imaginable file format and output device, SaxonScript Professional ($130) may become an essential tool for the serious Amiga desktop publisher.

For instance, Saxon Industries reports that the program supports all PostScript downloadable fonts (outline fonts that you can download from the Amiga into the printer's RAM) that are compatible with PageStream, Pro Page, or Saxon Publisher. The program also converts outline fonts into Amiga bitmapped, Saxon Publisher, and Adobe Type 1 PostScript formats, and "prints" PostScript files to the Amiga screen for a "soft" preview.

TypeSmith

Soft-Logik

TypeSmith is a full-featured outline-font editing/design program—the first of its kind on the Amiga. It is intended to let users create new PostScript, Compugraphic, or Soft-Logik outline fonts from scratch, or to edit existing fonts in these formats. Structured objects from Soft-Logik's Art Expression can also be imported to be used as characters.

Prior to the release of TypeSmith, an Amiga designer's only option was to auto-trace a scanned bitmap of a letter or logo, or to use the font editor in Dyna-CADD, a 3-D CAD program from Ditek Int'l with some good text-handling features. If the program lives up to its advance billing, it could fill a very annoying gap in the line-up of Amiga DTP programs, and stimulate a wave of Amiga-based font creation. □

—JE

Make Your Productions Look Like A Million Bucks For Only $99.



Upgrade your AmigaVision™ to the new AmigaVision Professional for only $99.

AmigaVision Professional is ideal for interactive courseware designers, multimedia developers, point-of-information displays, and business, government, and educational presentations.

With over 100 new improvements and features you'll save time and money. But it'll look like you spent a fortune.

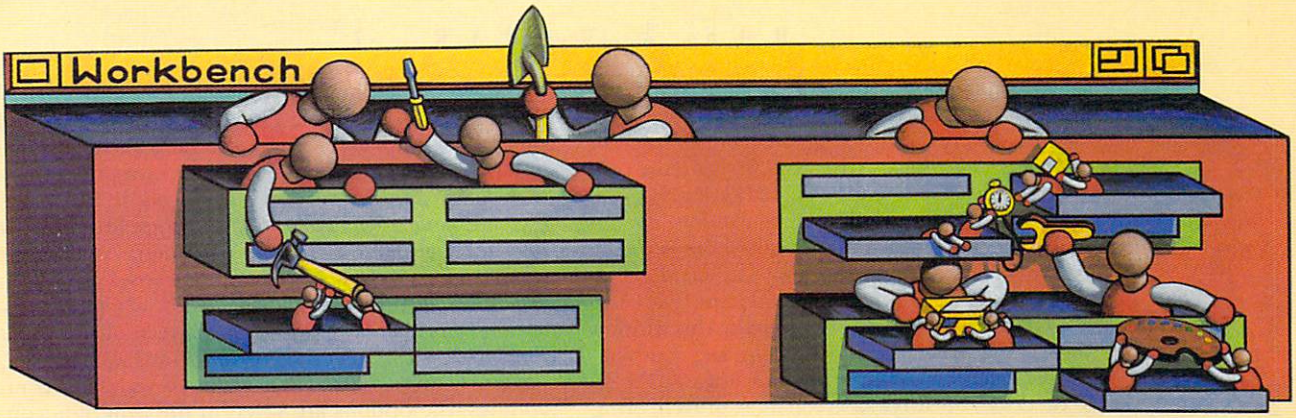
Call CommodoreExpress at 1-800-448-9987. And start making million dollar productions without spending a million.

Feature Highlights:

- Supports new AGA™ colors and resolutions
- Freely redistributable runtime player included
- Controls full motion video devices and CD-XL motion video files
- Plays a MIDI file out to a MIDI device or Amiga audio channels
- New resolution-independent transitions
- Streamed-in animations and sound files mean faster loading and reduced memory usage
- Word and character recognition allow hypertext browsing in text windows
- Enhanced object editor now has control panel functions
- Additional database functions

Commodore® AMIGA®

Circle 184 on Reader Service card.



Digging in to DOS

A SERIES THAT EXPLORES THE AMIGA'S RELEASE 2 OPERATING SYSTEM

Our series' final installment explains why AmigaDOS 2's Commodities programs have nothing to do with wheat futures, but lots to do with easy customization of your system.

Before Workbench 2.0 came along, Amiga owners used a hodge-podge of utility programs to perform specialized functions involving the mouse and keyboard. Different utilities would activate a window as the mouse pointer passed over it, assign text strings to function keys, or launch programs with a series of keystrokes. The problem was that these background programs would often interfere with applications such as word processors that relied on the function keys for their own purposes. Moreover, there was no guarantee that two such programs wouldn't both require the Alt-F1 key combination, for instance, for different purposes.

Workbench 2.0 addresses this problem, providing an officially sanctioned method for creating utility programs that manipulate mouse and keyboard input. This new facility makes it easier to create such programs and minimizes the risk that they will interfere either with applications programs or with each other. The system software at the heart of this scheme is the Commodities library, and programs that make use of it are called commodities. The standard commodities that Commodore supplies are found in the Commodities drawer in the Tools directory of your Workbench partition (if you have a hard drive), or of the Extras floppy disk.

Shared Values

While Commodities programs perform a wide range of functions, they have certain features in common. Each commodity is assigned a priority that determines which gets first crack at the input information. This priority value usually defaults to zero, but you can change it by editing the ToolTypes in the commodity's icon. You do this by clicking once on the icon, and selecting Information from the Icons menu on the Workbench. This brings up a window in which you can edit the lines of text in the ToolTypes list. The relevant line reads CX_PRIORITY=x, where x is the priority number. ►

BY SHELDON LEEMON

ILLUSTRATED BY BARTON STABLER

Another feature many commodities share is a control window from which you can alter the programs' settings. The CX_POPUP ToolType determines whether or not this window appears when you first run the program. If the ToolType reads CX_POPUP=NO, the program will run without opening its window. Even if the window does not open automatically, however, each commodity with a settings window also has a corresponding key combination, designated in its CX_POPKEY ToolType, that can be used to make this window appear. Because the descriptions of the key combinations are relatively straightforward (the phrase "CTRL ALT B" describes the three keys you must press to bring up the Blanker screen, for example), you can easily change them, or just read them from the Information window if you forget what they are.

You can also bring up a Commodities Settings window by using the Exchange program. This program, also located in the Commodities drawer, acts as a control center for all of your Commodities programs. When you run Exchange, it displays a list of all of the commodities that are currently running. Its gadgets allow you to show or hide the settings window for a particular program, deactivate or reactivate the program, or remove the program from the list by sending it a message to quit.

Choice Picks

Several standard Commodities programs come with Workbench versions 2.0 and higher. One of the simplest is AutoPoint, a program that activates any window over which the mouse pointer passes. This program does not have a control window—you just double-click on its icon to start it and double-click again to turn it off.

The NoCapsLock program works much the same way, but serves to disable the Caps Lock key. You can still use the Shift keys, but with NoCapsLock running, accidentally pressing the Caps Lock key won't suddenly shift you to ALL CAPITAL LETTERS.

Screen blankers are programs that put up a blank screen if you don't use the mouse or keyboard for a certain period of time. They save wear and tear on your monitor. Commodore's Commodities version is called Blanker, and in its simplest form, it pops up a control window into which you enter the number of seconds of inactivity that you want to elapse before the screen turns black. The 2.1 version adds a couple of options to create screen activity so that you won't forget about the blanker and think that your computer has suddenly gone dead. The Cycle Colors option causes the screen color to cycle through various shades, while the Animation option creates a moving pattern of lines that whirl around the screen. If both options are selected, the lines change color as they move. As with most commodities, the options are saved in the program icon, using the ToolTypes CYCLECOLORS=YES (or NO), ANIMATION=YES (or NO), and SECONDS=x, where x represents the number of seconds of inactivity before Blanker activates.

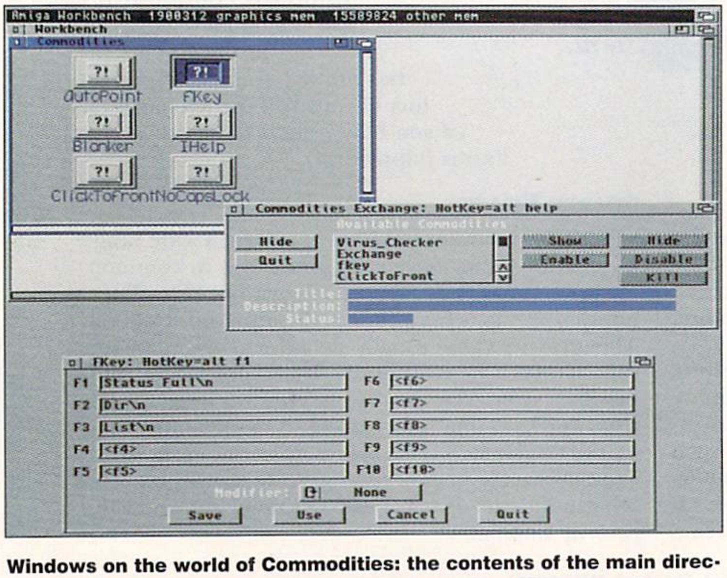
Programs that add more keyboard shortcuts have always been popular, so it is no surprise that a couple of these types of commodities are included. The IHelp (short for Intuition Helper) program lets you use the keyboard to perform a number of window-sizing and -activation functions that normally would require the mouse. By default, the F1 key invokes the Cycle Windows function, which brings the rearmost application window on the Workbench screen to the front and activates it. The F2 key enlarges the active window to its maximum size, while F3 shrinks it to its minimum; F4 cycles through possible sizes, as does clicking the Zoom gadget. The F5 key cycles through screens, bringing the rear screen to the front, as does the Left-Amiga-M combination. You can change any of these defaults by editing the ToolTypes in the program's icon. These default to CYCLE=F1, MAKEBIG=F2, MAKESMALL =F3, CYCLESCREEN=F4, and ZIPWINDOW=F5.

Functionally Literate

The FKey commodity is the program that finally answers the question "What do I do with those function keys, anyway?" FKey allows you to assign text to function keys (F1–F10) and shifted function keys. For example, if you assign "Dir \n" to the F1 key, when you press F1 at a Shell prompt, the function key will type in the Dir command and hit Return (the \n is the new line command that automatically presses the Return key at the end of the line). You can also assign special keystrokes—such as the zero on the numeric keypad—to a function key. This allows you to emulate the numeric pad even on the Amiga 600, which does not have these keys.

The 2.1 version of FKey carries this idea much further. In this version, you can assign functions to virtually any key or combination of keys on the keyboard; such functions are not restricted merely to inserting a string of text characters, either. For example, you can assign any of the IHelp functions (Cycle Windows, Cycle Screens, Enlarge Window, Shrink Window, Toggle Window Size) to any key, thus eliminating the need for a separate IHelp program. Like the popular public-domain program PopCLI, 2.1's FKey also allows you to run a program or ARexx script just by pressing one or more keys.

The ClickToFront program allows you to bring a window to the front of the screen by double-clicking anywhere inside it, which can be very handy if the depth gadget is not visible. By default, you must also press the



Windows on the world of Commodities: the contents of the main directory, the Commodities Exchange window, and the FKey requester.

Left Alt key while double-clicking in order to move the window. You can change this qualifier key, or eliminate it entirely, by changing the QUALIFIER= ToolType. Possible choices include Lalt, Ralt, Control, and None.

With the addition of the CrossDOS file-exchange program to Workbench 2.1 came a new CrossDOS commodity. This program allows you to specify text filtering of files read from an MS-DOS disk, such as changing the carriage-return and line-feed combination used in MS-DOS text files to the simple line feed used in Amiga text files. A translation button also allows you to do character translations, such as eliminating MS-DOS line-drawing characters that do not have Amiga equivalents.

One new commodity made its debut in Workbench 3.0. MouseBlanker makes the mouse pointer invisible whenever you are typing on the keyboard. This eliminates the annoying situation in which the mouse pointer hides what you are typing.

Commodities Futures

Although the Commodities scheme makes things easier for both the programmer and the user, it does exact a cost in the form of increased overhead. Having a number of Commodities programs running at the same time means that the system may have to check with each one every time you press a key or click the mouse. While this should not cause a noticeable slowdown under ordinary circumstances, it may if you run lots of commodities on an unaccelerated machine. To prevent this problem, Commodore software engineers have indicated that they may integrate the functions of some small Commodities programs, such as ClickToFront, directly into a future Kickstart version.

Even if Commodore reduces the number of standard commodities that it includes with Workbench, however, there will still be an enormous number of public-domain and shareware Commodities programs. These include screen blankers, clocks, print spoolers, window manipulators, text cut-and-paste utilities, and programs that add items to the Workbench Tools menu. If the idea of performing complex tasks with a single keystroke appeals to you, you'll find it worthwhile to track down some of these programs. ■

*Sheldon Leemon is a frequent contributor to **AmigaWorld** and writes for several other computer publications. He also wrote the fourth edition of the **AmigaDOS Reference Guide** (COMPUTE Books), a guide to using the CLI under operating-system releases 2 and 3. When he's not writing, you can often find him at Slipped Disk, a Detroit-area Amiga dealership.*

This article concludes our seven-part look at using the new features of Workbench 2.0. Would you like to see another series devoted to using system software in a more general way? Please let us know. Also let us know what topics you'd like to see covered. Write to "DOS Column," *AmigaWorld* Editorial, 80 Elm St., Peterborough, NH 03458.

Creative™ COMPUTERS

U.S. ORDERS ONLY:
800-872-8882
CANADA: 1-800-548-2512
4453 Redondo Beach Blvd.,
Lawndale, CA 90260

CUSTOMER SERVICE
310-214-0000
ORDER STATUS
Mon-Sat 8-6 PST
FAX: 310-214-0932

SPRING INVENTORY CLEARANCE SALE!

Final Blowout!

Amiga 3000



3008

25Mhz/105mb HD
5mb RAM

$999*

- 68030 25Mhz
- Quantum hard disk and built-in SCSI Controller
- Flicker Fixer Hardware
- Enhanced Chip Set
- OpalVision Compatible

*with purchase of 1960 monitor at $699

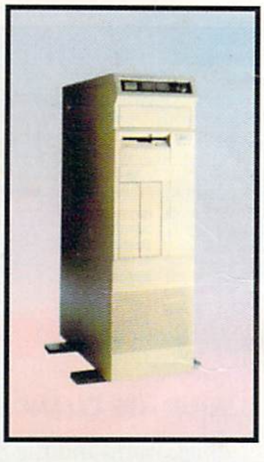
Amiga 3000 Tower

Lowest priced 040 Tower in the World!

The Amiga 3000T is a 68030 or 68040 machine running at 25Mhz. It includes 5mb of RAM and a 200mb SCSI hard drive.

A3000/030 Tower
$1599.00
3798

A3000/040 Tower
$2399.00
4769



A4000	A3000
32-Bit processor	32-Bit processor
Up to 18mb RAM w/o card	Up to 18mb RAM w/o card
Emulates Flicker Fixer	Has Flicker Fixer built-in
Medium Compatibility	High Compatibility
32-Bit Zorro III Bus 25Mhz	32-Bit Zorro III Bus 25Mhz
2mb Chip RAM	2mb Chip RAM
IDE Seagate HD Standard	SCSI HD Standard

Final days of this exclusive Amiga 3000 blowout! Limited quantities!

Creative Computers: Your One-Stop Shop for the most unbelievable deals on Amiga computers, hardware and software!

Commodore® AMIGA®

Amiga 600 Systems



A600 with 1084s Stereo Color Monitor

$499* 4926

A600HD with 1084s Stereo Color Monitor ......$699! 4927

***Base model includes Robocop 3D, Shadow of the Beast II, Myth and Microtext word processor for FREE!**

Amiga 1200



- '020 Processor
- AGA Chipset
- 2MB RAM
- Expandable

A1200 Base model 4639

A1200HD w/40MB HD 4640

80HD, 120HD and 200HD versions available! Call for details

CALL FOR LOWEST PRICING!

Amiga 2000 Systems



A2000C (includes 2.04 ECS) . $649! 3874

A2000HD (w/105mb HD).... $899! 4239

Monitor not included

Amiga 600 and Amiga 1200 Accessories

4648	EUREKA A601 W/ 1MB RAM 69.95
4431	BASEBOARD 600 0MB W/ CLOCK 39.95
4472	PCMCIA 2MB RAM BOARD A600 ..139.00
4473	PCMCIA 3MB RAM BOARD A600 ..189.00
4854	PCMCIA 4MB RAM BOARD A600 ..229.00
4936	MBX 1200 W/ CLOCK, 14MHZ 68881 ....179.00
4937	MBX 1200 W/ CLOCK, 25MHZ, 68882 ....259.00
4879	SEAGATE 2.5" 80MB IDE HD 249.95
4880	SEAGATE 2.5" 120MB IDE HD 369.00
4881	SEAGATE 2.5" 200MB IDE HD 599.00
4924	A600 PLASTIC DUST COVER 6.95
4923	A1200 PLASTIC DUST COVER 6.95
4931	A1200 INSIDERS GUIDE BOOK 24.95

CDTV



The interactive workstation to fire your imagination!

2741

Your Choice $399*

*Limited supply

A570



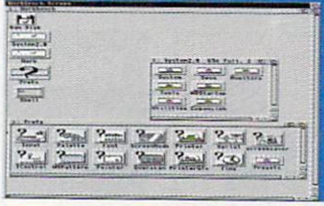
External CD-ROM Drive for A500

4477

AmigaDos 2.1

System 2.1 ROM and Software

$89.95 4646



System 2.1 Software only (use with 2.0 ROM)

$44.95 4645

Order by 5:00pm EST and get your order tomorrow!*

FEDERAL EXPRESS

*see policies on last page of this catalog.

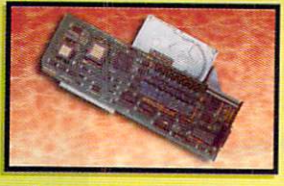
Prices Effective April 1,1993

Circle 13 on Reader Service card.

Incredible GVP Blowout

GVP SUPER BLOWOUT SALE!

G-Force 030 A2000



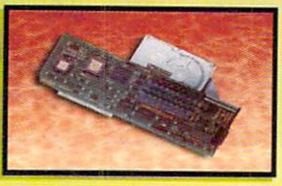
- 40Mhz processor with 68882
- Hard Drive mountable
- 4mb of 32-Bit RAM (16mb max.)
- Onboard Series II SCSI Controller (while supplies last)

$688.00 3843

FEDERAL EXPRESS — Get these items tomorrow at no extra charge!*

*Must order by 5:00pm EST Ask salesperson for details

G-Force 040 A2000



- 33Mhz processor with 68882
- Built-in SCSI Controller
- Serial + Parallel port
- Expandable to 16MB (while supplies last)

$877.00

G-Force 040 4MB RAM / 68882 .... $999.00 4322

A3000 G-Force 040 28Mhz, 2MB RAM, 68882 .... $899.00 3653

G-Force 25Mhz, 1MB RAM, 68882 .... $499.00 3937

GVP GREAT VALLEY PRODUCTS



Factory installed & tested hard drive — GVP 2-year warranty

A530 Turbo

w/120MB Drive

$599.00 4219

- A500 HD8 with 40mhz 68030
- 1mb of 32-Bit RAM expandable to 8mb
- Socket for 68882 Math chip
- "Mini Slot" for PC emulator & more!
- Turbo switch for compatibility.
- Includes SCSI pass thru.
- Dedicated power supply included!

HARD CARDS

Series II A2000 SCSI Hard Disk and RAM Card

Factory installed & tested hard drive — GVP 2-year warranty

A2000 HC8+0/80 (80HD) ... $299.00 2183

A2000 HC8+0/120 (120HD) $499.00 3849

A2000 HC8+0/213 (213HD) $599.00 4398

PC286 Module

Optional PC286 AT compatibility. 16Mhz 286 board which plugs inside hard disk unit. $99.95 3655

A1230 Turbo+

New! In Stock!

- 40Mhz 68EC030
- 0MB RAM, expandable to 32mb of 60ns RAM
- Optional 68882 Math-Coprocessor
- Does NOT void factory warranty



Also Available

A1230+ 4MB with 40Mhz Math CoProcessor $599

$399.00 4821

SUPER HARD DRIVE BUNDLE

A500HD+ w/80MB HD and Cinemorph

- Super expansion for Amiga 500
- Expandable to 8MB RAM
- 80MB Quantum hard drive
- Cinemorph morphing software!



FREE!!!



Both Only $399.95 4661

G-LOCK



Works with all Amigas, External SVHS Genlock, Real-time Software Control, and more!

In Stock!

$399.00 4526

PHONE PAK $299.00

Now, your Amiga® 2000/3000 is a Computer, Fax Machine, VoiceMail System, and Answering Machine all at once! 4333

Prices Effective April 1,1993

We offer the lowest overnight rates in the business**

DHL WORLDWIDE EXPRESS

DHL Overnight Shipping to Canada as low as $15

Most rates cheaper than Express Mail at the Post Office!

Spring Inventory Clearance Sale!



Bars & Pipes

$19.95 — 0863

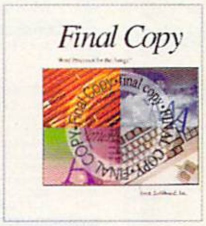
- Professional MIDI Sequencer
- Global graphic display of music on all tracks
- MIDI file format compatible
- Sync to MIDI Time Code (SMPTE)



Red Baron

$19.99 — 3760

- Best-selling WW I air combat simulator
- Analog joystick compatible
- Design your own custom airplane colors



Final Copy 1.3

$39.95 — 3559

- Excellent word processing program with Postscript support
- 116,000 Word Dictionary
- 470,000 Word Thesaurus
- IFF Graphic support
- Workbench 2.0 compatible

These items are in very limited supply — Order today!!!

ALL ITEMS ARE LIMITED TO STOCK ON HAND — REMAINING QUANTITIES IN PARENTHESIS

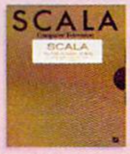
	ENTERTAINMENT		
0770	BLOCKOUT	$10.00	(1)
3395	COSMOSTRUCTION	5.00	(1)
3794	CYBERCON III	5.00	(1)
1743	DRAGONSTRIKE	5.00	(5)
0462	DUNGEON MASTER EDITOR	10.00	(2)
2463	DUNG. MASTER HINT DISK	7.00	(12)
3556	HUNTER	10.00	(3)
3494	KNIGHTS OF CRYSTALION	10.00	(1)
2999	MEDIEVAL WARRIOR	10.00	(6)
	PUBLISHING		
2488	DRAW 4D	45.00	(1)
4963	FANCY 3D FONTS	10.00	(2)
4565	INTELLITYPE	5.00	(23)
3659	INTROCAD FLOWCHART SYMBOLS	3.00	(8)
5903	NEWSLETTER FONT COLLEC.	5.00	(5)
3005	SCRIBBLE PLATINUM	10.00	(1)
6003	ZING SPELL	5.00	(2)
	VIDEO PRODUCTION		
2301	BUTCHER	15.00	(1)
—	PRO VIDEO CG I	29.95	(1)
0632	VIDEO PAGE	10.00	(2)
0753	VIVA	25.00	(3)
	TELECOMMUNICATIONS		
0599	DIGA AEGIS TELECOM	15.00	(2)
3051	DR. TERM PROFESSIONAL	15.00	(1)
	PROGRAMMING		
2652	AC/BASIC	20.00	(1)
1825	BLITZ BASIC	20.00	(6)
3029	SOFTWORKS BASIC	10.00	(1)
	BOOKS		
3835	AIR COMBAT SIM. STRATEGY	7.00	(16)
3317	HARPOON BATTLE BOOK	7.00	(7)
	MISCELLANEOUS		
1266	BGRAPHICS	20.00	(1)
0842	CHOROMAP	5.00	(2)
1738	FRED'S FLOWERS	5.00	(4)
1739	FRED'S BUTTERFLIES	5.00	(5)
3505	IMPACT	10.00	(1)
0068	INVISION	35.00	(1)
—	ASSORTED SOUNDQUEST PRODUCTS	19.95	
—	DISCOVERY EDUCATIONAL DATA DISKS	5.00	
—	ASSORTED MADRIGAL ARCHITECTURAL LIBRARIES	10.00	
—	ASSORTED ANTIC DESIGN DISKS	10.00	



Who!, What!, When!, Where!

- Personal organizer
- Appointment Scheduler
- Tone or Pulse Autodial

Blowout Price $9.95 — 0350



Scala Multimedia . $99.95

Image Presentation program with audio, animation and titling features.

Special Edition — 4478

PC/XT Bridgecard

- Gives your Amiga 2000 PC Compatibility
- 4.77Mhz 8088 PC/XT Emulator with 512k RAM
- Includes low density 360KB 5.25 floppy drive unit
- Supports monochrome text and CGA graphics
- Includes MS-DOS 3.2

Blowout Price $49.95

Documentation language may vary. — 2088



Image F/X $184.95

Total Image Processing Package! RGB, CMYK, HVS adjustment, Full Motion Morphs and more...

4609

DSS-8 .. $79.95 — 3348

Record, edit, compose...with a high-quality, stereo sound sampler. Includes a fast, powerful, easy-to-use editor and a self-contained 4-track sequencer.



Prices Effective April 1,1993

Creative™ COMPUTERS

U.S. ORDERS ONLY:
800-872-8882
CANADA: 1-800-548-2512
4453 Redondo Beach Blvd.,
Lawndale, CA 90260

CUSTOMER SERVICE
310-214-0000
ORDER STATUS
Mon-Sat 8-6 PST
FAX: 310-214-0932

DRIVES, HARD DRIVES AND CONTROLLERS

AT DRIVES & CONTR

3520	TRUMPCARD 500 AT	179.00

SCSI CONTROLLERS

4982	ICD TRIFECTA 500 LX	299.00
4735	ICD TRIFECTA 2000 LX SCSI2	199.00
3144	IVS GRANDSLAM 2000	209.00
3175	IVS GRANDSLAM 500	289.00

FLOPPY DRIVES

1470	A2000 INT. DISK DRIVE	99.95
2307	A3000 INT DISK DRIVE	99.95
4338	ROCLITE FLOPPY DRIVE AV	89.95

HARD DRIVES

55117	MAXTOR 120MB SCSI	299.00
4598	MAXTOR 213MB SCSI	399.00
3898	MAXTOR 340MB SCSI	799.00
3969	MAXTOR 535MB SCSI	1049.00
55170	MAXTOR 760MB SCSI	1249.00
60655	MAXTOR 1.5GB SCSI	1899.00
60482	MICROPOLIS 340MB SCSI2	1299.00
60084	MICROPOLIS 660 MB SCSI	1399.00
55813	MICROPOLIS 1.2GB SCSI	1899.00
4354	QUANTUM 85MB ELS SCSI	239.00
4355	QUANTUM 127MB ELS SCSI	299.00
4356	QUANTUM 170MB ELS SCSI	339.00
3860	QUANTUM 240MB LPS SCSI	399.00
3210	QUANTUM 425MB SCSI	995.00
4818	QUANTUM 525MB LPS SCSI	1049.00
4879	SEAGATE 80MB 2.5 IDE	249.00
4880	SEAGATE 120MB 2.5 IDE	369.00
4881	SEAGATE 200MB 2.5 IDE	569.00

CD ROM HARDWARE

4273	CHINON CD ROM INTERNAL W/ SOFTWARE DRIVER	CALL
4477	A570 CD-ROM A500	(SEE CBM LISTING)

REMOVABLE MEDIA

2692	SYQUEST 44MB DRIVE	299.00
3299	SYQUEST 88MB DRIVE	399.00
4762	SYQUEST 44/88 DRIVE	429.00
4765	SYQUEST 44/88 EXTERNL KIT	669.00
1906	SYQUEST CARTRIDGE 45MB	79.00
3304	SYQUEST CARTRIDGE 88MB	109.00
4405	TOUCHDOWN 100 TAPE BACKUP EXTERNAL DRIVE	599.00

CBM PRODUCTS

COMMODORE SOFTWARE

9010	AMIGA VISION	44.95
2695	TCP/IP NETWRKNG SOFTWRE	149.00

COMMODORE REPLACEMENT PARTS

2013	A2000 KEYBOARD	129.00
2023	A3000 POWER SUPPLY	199.00
4046	A500 DRIVE REPLACEMENT	159.00

COMMODORE ACCESSORIES

1011	A1011 EXTERNAL FLOPPY 3.5" FDD	139.00
1680	A1680 1200 BAUD MODEM	49.95
2232	A2232 MULTI-SERIAL BRD	299.00
2286	A2286 AT BRIDGECARD	429.00
2320	A2320 DISPLAY ENHANCER FOR A2000	239.00
4357	A2386SX BRIDGEBOARD	479.00
0520	A520 COMPOSITE ADAPTOR	41.95
4477	A570 CD-ROM FOR A500	399.00

ACCELERATORS

FOR GVP'S ACCELERATORS SEE OUR GVP FULL PAGE AD

2542	ADSPEED	179.00
4680	CSA DERRINGER W/0K	309.00
4241	MERCURY 68040 BOARD FOR A3000 35 MHZ	CALL
4230	MICROBOTICS VXL30 25MHZ 500/2000	319.00
4212	PROGRESSIVE A500 040 28MHZ/4MB	799.00
3219	PROGRESSIVE A2000 28MHZ '040	CALL
4517	PROGRESSIVE 68040 BOARD FOR A2000 33MHZ	CALL
3218	PROGRESSIVE A3000 '040	499.00
4920	SUPRA TURBO 28MHZ A500	169.00
4921	SUPRA TURBO 28MHZ A2000	169.00
4232	VECTOR 030 25MHZ A2000	579.00
4074	ZEUS 68040 28MHZ A2000	CALL
4080	ZEUS 68040 33MHZ A2000	CALL

PRINTERS AND ACCESSORIES

PRINTERS

1740	DESKJET 500	389.00
3367	DESKJET 500C	599.00
4606	EPSON AP-3250 24-PIN PRINTER	209.00
3906	LASERJET IIP+	899.00
3158	LASERJET IIIP WITH EP-L TONER	1199.00
55220	NEWGEN PS/300P	1399.00
1052	PAINTJET PARALLEL PRINTER	699.00

PRINT CARTRIDGES

1028	DESKJET BLACK CARTRIDGE	16.95
60123	DESKJET BLACK CARTRIDGE 1000 PGS	29.00
1872	DESKJET INK COLOR KIT STARTER	34.95
1399	EP-L TONER CARTRIDGE LASER PRINTER TONER	76.95
51071	EP-S TONER CARTRIDGE LASER PRINTER TONER	99.95
4608	EPSON AP3250 BLACK RIBBN	9.95
1053	PAINTJET BLACK CARTRIDGE FOR XL	25.95
1054	PAINTJET COLOR CARTRIDGE	29.95

LASERJET PRINTER CARTRIDGES

1687	PACIFIC PAGE P E POSTSCRIPT - IIP	369.00
2344	PACIFIC 4 MEM. 2MB L-JET IIP/III	179.00

PRINTER ACCESSORIES

1873	DESKJET INK CLEANING INKMUN	3.95
4607	EPSON AP-3250 TRACTOR FEED	39.95
1056	PAINTJET CUT PAPER	17.95
1057	PAINTJET TRANS FILM	54.95
1055	PAINTJET Z-FOLD PAPER	17.95

MONITORS AND ACCESSORIES

MULTISYNC MONITORS

4143	IDEK MF-5017 17" LP	999.00
4658	IDEK MF-5017 17" SP	999.00
4615	IDEK MF-8317 17" HP	1249.00
4274	IDEK MF-5021	1899.00
2121	SEIKO 1440 MULTISYNC	429.00
4649	SEIKO 1450 MULTI SYNC	519.00
5059	SONY 1302A	699.00
4019	SONY 1304S MULTISYNC	625.00

INPUT HARDWARE AND ACCESSORIES

4597	AMIGA PC BUS MOUSE ADAPTER	13.95
4548	ANALOG JOYSTICK ADAPTER	13.95
4813	CH ANALOG FLIGHTSTICK (IBM)	39.95
2371	GOLDEN IMAGE 2 BUTTON MOUSE	34.95
4426	GRAVIS AMIGA GAMEPAD	19.95
4544	MICROTOUCH TOUCH SCREEN	829.00
3742	MIRACLE KEYBOARD	359.00
4557	PRO PARALLEL ADAPTER FOR FIGHTER DUEL PRO	15.95
1531	SLICK STICK JOYSTICK	7.95
4536	SPEED KING ANALOG JOYSTICK	19.95
1164	TAC-2 JOYSTICK	10.95
4934	TAC-3 JOYSTICK	11.95
4445	TAC-30 JOYSTICK	10.95
4446	TAC-50 JOYSTICK	13.95
1416	TRACKBALL AMTRAC	59.95
4447	Q-STICK JOYSTICK	7.95
4558	WACOM AMIGA DRIVER WITH CABLE	84.95
3293	WIZ DRAWING TABLET 7.5 X 7.5	239.00

SCANNERS/DIGITIZERS

4664	EPSON ES-600C SCANNER	849.00
4665	EPSON ES-800C SCANNER	1199.00
4691	EPSON SCANNER TRANSPARENCY OPTION	799.00
4692	EPSON SCANNER AUTO DOCUMENT FEEDER	499.00
4462	EUREKA HAND SCANNER 400	159.00

AUDIO/MIDI

1128	ECE MIDI A1000	49.95
1655	ECE MIDI PLUS A500/A2000/A3000	49.95
4370	EUREKA MIDI WITH PASSTHROUGH	38.95
1538	MIDI GOLD INSIDER	64.95
4767	NES MIDI INTERFACE	49.95
4504	PERFECT SOUND 3.1	69.95

Newtek Video Toaster



Digital Video Effects, Character Generator, 3D Renderer, 24-Bit painting & more!

$1899.00 3628

Factory Video Toaster Refurbished **$1699.00** 4200

Art Department Professional Ver 2.1



OpalVision Compatible

Art Department Pro gives you the most powerful image processing system ever offered for the Amiga. Now with JPEG compresion and 24-Bit printing.... $159.00 3634

Digital Creations

DCTV Full NTSC Color Display and Digitizer.



FREE FEDERAL EXPRESS on these two items!

1721 **$299.00**

PAL Version now available

The Kitchen Sync **$1295.00**
Two complete TBC's on one card works with any video source. S-VHS and Hi-8 compatible. 3639

DCTV: A guided tour

This easy-to-follow, comprehensive VHS tutorial will tell you all you need to know about DCTV. **$19.95** 3160



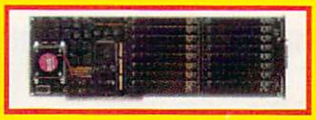
PROGRESSIVE PERIPHERALS INC.

NEW LOWER PRICES!

A2000 28Mhz '040...$649.00 3219

Expandable up to 32mb of RAM





Zeus 040
Accelerator for the A2000

SCSI-2 DMA HD Controller expandable to 64mb of 32-Bit RAM.

28Mhz $899.00 4074
33Mhz ... $1149.00 4080

The FASTEST A3000 Accelerator

A3000 '040 25Mhz $499.00 3218

Mercury 35Mhz w/Ømb $899.00 4241

Prices Effective April 1,1993

Visit our Amiga Superstores!

South Bay: 4453 Redondo Beach Blvd. - Lawndale, CA 90260 - Phone: (310) 542-2292
Westside: 318 Wilshire Blvd. - Santa Monica, CA 90401 - -Phone: (310) 394-7779

Mon-Sat 10am-7pm PST
Sun 11am-6pm

EXPANSION/PORTS

4902	DENISE EXTENDER BUS	85.00
1248	DUAL SERIAL BOARD	269.00
4394	GVP INPUT/OUTPUT EXTENDR	199.00

EMULATORS

4176	AMAX II PLUS	359.00
2286	AT BRIDGEBOARD	(SEE CBM LISTING)
4357	386SX BRIDGEBRD	(SEE CBM LISTING)

POWER SUPPLIES

4696	BENCH POWER SUPPLY	199.00
1857	BIGFOOT 200 POWER SUPPLY	97.95
2434	IVS POWER SUPPLY	89.95

CHIPS (VARIOUS)

4994	68882/40 MHZ PLCC TYPE MATH COPROC	139.95
2143	68882/50 MATH COPROC	169.00
2189	IC AGNUS: FATTER 1MB CBM 8372	69.00
2425	IC AGNUS: SUPER FAT 2MB A3000 AGNUS CHIP	99.00
5212	KICKSTART 1.3 ROM	39.00
4229	MEGACHIP 500/2000 W/ AGNUS	199.00
3881	MULTISTART II REV 6A	39.95

MODEMS

8877	SUPRA 2400 BAUD MODEM	79.95
3184	SUPRAFAX 2400ZI PLUS	119.00
4150	SUPRAFAX MODEM 2400/9600FAX GENERIC	129.00
4152	SUPRAFAX MODEM 2400/9600FAX AMIGA	174.00
4086	SUPRAFAX MODEM 9600 V.32	259.00
3732	SUPRAFAX MODEM 14.4/V.32BIS	299.00

MEMORY EXPANSION

RAM CHIPS

—	MOST RAM CHIP SIZES AVAILABLE AT ECONOMICAL PRICES	CALL

A500 INTERNAL RAM BOARDS

1652	ADRAM 540 W/0K	89.95
4198	ALFA DATA 501 CLONE	36.95
1580	BASEBOARD A500 0/4 MB	89.00
4438	EUREKA A501 CLONE	38.95
1585	SUPRARAM 500 1/2 MEG	47.00

A500 EXTERNAL RAM BOARDS

2506	SUPRARAM 500RX 1MB	135.00
2773	SUPRARAM 500RX 2MB	199.00
3192	SUPRARAM 500RX 8MB	429.00

A2000 RAM BOARDS

3889	DKB 2632 RAM EXPANSION BOARD FOR A2500	CALL
1265	SUPRARAM 2000 2MB RAM	179.00
1411	SUPRARAM 2000 4MB RAM	240.00
1533	SUPRARAM 2000 6MB RAM	299.00
1291	SUPRARAM 2000 8MB RAM	379.00

A600 / A1200 ACCESSORIES

4431	BASEBOARD 600 0MB W/ CLOCK	39.95
4648	EUREKA A601 W/1MB	69.95
4472	PCMCIA 2MB BRD A600	139.00
4854	PCMCIA 3MB BRD A600	189.00
4473	PCMCIA 4MB BRD A600	229.00
4879	SEAGATE 80MB 2.5 IDE	249.00
4880	SEAGATE 120MB 2.5 IDE	369.00
4881	SEAGATE 200MB 2.5 IDE	569.00
4924	A600 PLASTIC DUST COVER	6.95
4936	MICROBOTICS MBX1200 W/ 68882 14MHZ W/CLOCK	179.00
4937	MICROBOTICS MBX1200 W/ 68882 25MHZ W/CLOCK	259.00
4923	A1200 PLASTIC DUST COVER	6.95
4931	A1200 INSIDERS GUIDBOOK	24.95

AGA COMPATIBLE SOFTWARE

3634	ART DEPARTMENT PRO. V 2.1	159.00
4638	CALIGARI 24	279.00
4391	CINEMORPH	84.95
4633	DELUXE PAINT IV AGA	119.00
4729	DIRECTORY OPUS 4.0	64.95
3559	FINAL COPY 1.3	39.95
4469	FINAL COPY II RELEASE 2	89.95
4609	IMAGE F/X	199.00
4348	MORPHPLUS	179.00
4590	PAGESETTER 3	59.95
4957	PROFESSIONAL PAGE 4.0	169.00
4971	SLEEPWALKER AGA	39.95
4893	VISTA PROFESSIONAL 3.0	59.95
4852	ZOOL AGA	34.95

VIDEO SOLUTIONS

(SOFTWARE AND HARDWARE)

IMAGE PROCESSING SOFTWARE

3634	ART DEPARTMENT PRO. V 2.1	159.00
2584	ART DEPARTMENT CONVERSION PAK	52.95
4414	ASDG TRUE PRINT 24	64.95
4391	CINEMORPH	84.95
4609	IMAGE F/X	199.00
3870	IMAGEMASTER	149.00
4021	IMAGEMASTER FIRECRACKER VER.	139.00
4348	MORPHPLUS	179.00

3D RENDERING/ANIMATION SOFTWARE

4542	ALADDIN 4D	279.00
4030	ANIMATRIX MODELER	64.95
3290	BROADCAST 3D FONTS - IMAGINE	79.95
3749	BROADCAST 3D FONTS - LIGHTWAVE	79.95
4312	BROADCAST 3D FONTS - MASTER PACK 2 LIGHTWAVE	79.95
4313	BROADCAST 3D FONTS - MASTER PACK 3 LIGHTWAVE	79.95
4711	BROADCAST 3D FONTS - PRO PACK 1 LIGHTWAVE	169.00
3807	CALIGARI II	149.00
4638	CALIGARI 24	279.00
4007	CYCLEMAN FOR IMAGINE	39.95
4315	ESSENCE FOR IMAGINE	49.95
4208	IMAGINE 1.1 W/FREE VIDEO	79.95
3826	IMAGINE 2.0	179.00
4487	INTERCHANGE PLUS	64.95
2996	MAP MASTER FOR IMAGINE	45.95
2954	MAP MASTER FOR LIGHTWAVE	64.95
4455	MORPHUS	69.95
4343	MOTION MAN FOR LIGHTWAVE	119.00
4582	PIXEL 3D PROFESSIONAL	149.00
4556	PLAYMATION	369.00
4292	PRO TEXTURES VOL. II	42.95
3203	REAL 3D V1.4	119.00
4907	VIRTUAL REALITY STUDIO II	64.95

DESKTOP VIDEO

1805	BROADCAST TITLER II	229.00
4250	BROADCAST TITLER II SUPER HIGH RES VERSION	279.00
4471	BROADCAST TITLER II FONT PACK 2	94.95
3772	PRO VIDEO CG II	129.00
3888	SCREEN MAKER 24-BIT	59.95
4377	TEXTURE CITY CD-ROM	119.00
4220	TEXTURE CITY PRO 60	129.00
4584	TOASTER VISION	139.00
3699	VIDEO DIRECTOR	149.00

VIDEO ENHANCEMENT HARDWARE

4164	CHROMA KEY PLUS	359.00
0152	COLOR SPLITTER	109.00
—	DMI RESOLVER BOARDS	CALL
2431	FIRECRACKER 24/2 MEG	819.00
8787	FLICKER FIXER	249.00
4201	FLICKER FREE VIDEO 2	239.00
4277	OPALVISION 24-BIT MAIN BOARD	849.00
4092	RAMBRANDT 24-BIT VID. BRD.	3595.00

GENLOCKS

4526	GVP G-LOCK GENLOCK	399.00
3725	ROCGEN PLUS GENLOCK	329.00
6879	SUPERGEN GENLOCK	539.00
1440	SUPERGEN 2000S	1350.00

EDITING HARDWARE

—	BCD 2000A:	
3635	-JVC DECKS	799.00
3281	-PANASONIC 7750	799.00
3636	-SONY 9 PIN DECKS	799.00
4260	NUCLEUS SINGLE FRAME CONTROLLER 2.0	369.00
—	PERSONAL VIDEO DISTRIBUTION AMPLIFIER:	











Prices Effective April 1,1993

Circle 13 on Reader Service card.

Creative™ COMPUTERS

U.S. ORDERS ONLY:
800-872-8882
CANADA: 1-800-548-2512
4453 Redondo Beach Blvd.,
Lawndale, CA 90260

CUSTOMER SERVICE
310-214-0000
ORDER STATUS
Mon-Sat 8-6 PST
FAX: 310-214-0932

4217	-AMIGA SLOT	139.00
4216	-IBM SLOT	139.00

HOT INTEGRATED VIDEO HARDWARE

1721	DCTV	299.00
4331	DCTV RGB ADAPTOR	199.00
4630	DIGITAL MICRONICS VIVID 24	2795.00
4521	DPS REMOTE CONTROL	279.00
3639	KITCHEN SYNC	1299.00
4194	KITCHEN SYNC S-VIDEO OPTION	119.00
4009	KITCHEN SYNC GENLOCK OPTION	149.00
4277	OPALVISION 24-BIT MAIN BOARD	849.00
3940	PERSONAL VECTORSCOPE	789.00
4486	PERSONAL TBC III	879.00
4892	TOASTER Y/C PLUS	879.00
3628	VIDEO TOASTER 2.0	1999.00

FRAMEGRABBER HARDWARE

4596	SPECTRUM 24-BIT FRAMEGRABBER	479.00
4986	V-LAB 24-BIT DIGITIZER	399.00

BUSINESS SOFTWARE

ACCOUNTING

7066	BEST BUSINESS MGMT	129.00
0226	DESKTOP BUDGET	40.95
4510	HOME FRONT 2.5	44.95
1854	PHASAR 4.09	49.95
0979	SERVICE INDUSTRY ACCTNG	109.00

DESKTOP PUBLISHING

4507	HOT LINKS 1.1 /PAGESTREAM	99.95
4697	MIGRAPH OCR JR.	129.95
4125	MIGRAPH OCR MULTILINGUAL SOFTWARE	249.00
4590	PAGESETTER 3	59.95
3833	PAGESTREAM 2.2	199.00
0410	PROF. PAGE STRUCTURED CLIP ART	38.95
0409	PROF. PAGE TEMPLATES	35.95
4957	PROFESSIONAL PAGE 4.0	169.00
4730	PROFESSIONAL PAGE 4.0/ DRAW 3.0 BUNDLE	239.00

SPREADSHEET

4187	MAXIPLAN 4.0	99.95
0487	PROFESSIONAL CALC	189.00

DATABASES

2352	SUPERBASE PERSONAL 2	59.95
2762	SUPERBASE PROFESSIONAL 4	199.00

WORD PROCESSING

3559	FINAL COPY 1.3	39.95
4469	FINAL COPY II RELEASE 2	89.95
4701	PROPER GRAMMAR II	59.95
4406	PROWRITE 3.3	59.95
2442	TRANSWRITE	39.95

HOME/PRODUCTIVITY

4228	CONTACT 2.0	44.95
4421	MINI OFFICE	69.95
4075	NOTEBOOK	26.95
4929	TAX BREAK '92	49.95
0797	TOP FORM	44.95

EDUCATIONAL SOFTWARE

GENERAL EDUCATIONAL

4027	DISTANT SUNS VERSION 4.1	49.95
2440	PELICAN PRESS	64.95
3627	VOYAGER V1.1	59.95
1268	WHERE IN EUROPE IS CARMEN SAN DIEGO	34.95
1833	WHERE IN TIME IS CARMEN SANDIEGO	34.95
0766	WHERE IN THE U.S.A. IS CARMEN SAN DIEGO	34.95
0470	WHERE IN THE WORLD IS CARMEN SAN DIEGO	34.95
0699	WORLD ATLAS 2.5	29.49

ELEMENTARY EDUCATIONAL

4959	AFRICAN RAINFOREST COLORING BOOK	29.95
3684	ALL ABOUT AMERICA	19.95
4129	AMY'S FUN 2 3	29.95
3681	ANIMAL KINGDOM	22.95
4022	AT THE ZOO	14.95
2912	BARNEY BEAR GOES CAMPING	12.95
0104	BARNEY BEAR GOES TO FARM	12.95
1219	BARNEY BEAR GOES TO SCHOOL	12.95
1679	BARNEY BEAR GOES TO SPACE	12.95
5602	DECIMAL DUNGEON	22.95
3680	FRACTION ACTION	22.95
4709	FUN SCHOOL FREDDY FROG	32.95
4668	FUN SCHOOL MERLIN'S MATH	32.95
4515	FUN SCHOOL PAINT & CREATE	32.95
4690	FUN SCHOOL SAMMY SPY	32.95
4514	FUN SCHOOL SPELLING FAIR	32.95
1694	KATIES FARM	25.95
5604	KINDERAMA	22.95
3643	LAND OF THE UNICORN	22.95
5605	MATH WIZARD	22.95
2753	MCGEE	25.95
0255	MY PAINT 2.0	29.95
5607	READ-A-RAMA	24.95

LANGUAGE INSTRUCTION

3622	AUDIO GALLERY CHINESE	74.95
3623	AUDIO GALLERY GERMAN	54.95
3621	AUDIO GALLERY JAPANESE	74.95
4130	AUDIO GALLERY RUSSIAN	79.95
3558	AUDIO GALLERY SPANISH	54.95
0954	LINKWORD FRENCH	19.95
0955	LINKWORD GERMAN	19.95
0956	LINKWORD ITALIAN	19.95
0957	LINKWORD RUSSIAN	19.95
0953	LINKWORD SPANISH	19.95
4980	MASPEAK JR. HEBREW TUTOR	94.95

FONTS

GENERAL FONTS

——	ALL AGFA FONTS AVAILABLE	CALL
0821	KARA ANIMFONTS 1	29.95
0822	KARA ANIMFONTS 2	29.95
1837	KARA ANIMFONTS 3	29.95
3758	KARA ANIMFONTS 4	35.95
4660	KARA ANIMFONTS 5	34.95
0337	KARA FONTS HEADLINES	44.95
0358	KARA FONTS HEADLINES 2	39.95
3759	KARA FONTS HEADLINES 3	46.95
4659	KARA FONTS HEADLINES 4	44.95
1838	KARA FONTS STARFIELDS	34.95
0359	KARA FONTS SUBHEADS	39.95
0095	MASTERPIECE FONTS	159.00
3319	600 AMIGA FONTS	19.95
4962	TYPE SMITH	129.00
——	SOFTFACES FOR FINAL COPY:	
4062	-VOLUME I	59.95
4066	-VOLUME II	59.95
4271	-VOLUME III	59.95
4272	-VOLUME IV	59.95

DTP/PAGESTREAM FONTS

3564	PAGESTREAM CLASSIC FONTS	129.00
3562	PAGESTREAM DESIGNER FONTS	129.00
2827	PAGESTREAM FONT PACK 1	46.95
3560	PAGESTREAM NEWSLETTER FONTS	64.95
2826	PAGESTREAM PLUS PACK	46.95
3561	PAGESTREAM STARTER FONTS	64.95
4160	PRO STREAM PLUS FONTS	42.95

VIDEO/TOASTER FONTS

3197	1ST PRIZE TOASTED FONTS SET 4	40.95
2961	CINNAMON TOAST FONTS VOL I	64.95
2962	CINNAMON TOAST FONTS VOL II	64.95
3155	KARA TOASTER FONTS VOL I	54.95
3156	KARA TOASTER FONTS VOL II	54.95
4282	KARA TOASTER FONTS VOL III	54.95
4283	KARA TOASTER FONTS VOL IV	54.95
3143	MASTERPIECE TOASTER FONTS	89.95

GRAPHICS SOFTWARE AND HARDWARE

ANIMATION SOFTWARE

0387	DISNEY ANIMATION STUDIO	49.95
8839	THE DIRECTOR V2.0	74.95
3850	FRACTAL PRO 5.0	CALL
4545	SCENERY ANIMATOR 2.0	59.95
——	SCENERY ANIM. DATA DISKS:	
3784	-GRND CANYON	18.95
3786	-OAHU	18.95
3785	-YOSEMITE	18.95
2951	SURFACE MASTER FOR IMAGINE	25.95
3856	VISTA PROFESSIONAL 2.0	59.95
——	VISTA PRO 2.0 DATA DISKS:	
2456	-CALIFORNIA	29.95



DPS Personal Vector Scope
The Perfect Companion for the TBC III
$749.00
3940



DPS Personal TBC III
- Rock solid freeze
- Variable strobe
- True Monochrome mode

$799.00
4486

FIVE YEAR Limited Warranty — SUPRA QUALITY GUARANTEE

Supra Corporation

Modems

Supra 2400 Baud Modem	69.95	8877
SupraFax 2400/9600 Data	129.00	4150
SupraFax Modem 14.4/14.4k	299.00	3732



Supra FAX
Modem 14.4k/14.4k $349.00
3983
Includes software and cable

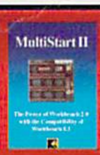


SupraRam RX for Amiga 500
2506 1MB 119.00
SupraRam RX
2773 2MB 169.00
SupraRam 500
1585 512k 39.95

Due to industry fluctuation, RAM prices are subject to change without notice



MegaChip 2000/500 DKB
Now get 2 megabytes of Chip RAM for the Amiga 2000 & 500 .... $199.00 (with Agnus)
4229



MultiStart II DKB
Provides for Amiga 500's & 2000's to operate under Workbench 1.3 & 2.0 .. $39.95
3881

4462



Eureka Scanner $159.00
400 DPI Black/white hand scanner
Parallel interface w/pass thru
Scan a logo with this and turn it into a 3D object with Pixel 3D Profesional!

Pixel 3D Pro $149.00
Use PixPro to convert bitmap pictures of logos and shapes to 3D objects with unrivaled quality.



4582

Educational, Corporate and Aerospace purchase orders accepted. Call (310) 542-2292 for details.

USE OUR TOLL-FREE INTERNATIONAL PHONE LINES

Australia 0014-800-125-712 ; Canada 1-800-548-2512; Denmark 0434-0297; France 0590-1099; Italy 1678-74086; Japan 0031-11-1351; Netherlands 06-022-8613; Norway 050-12029; Switzerland 046-05-3420; United Kingdom 0800-89-1178.

2759	-FLAMING GORGE-DATA 2	29.95
2755	-GRAND CANYON-DATA 1	29.95
2756	-GRAND CANYON-DATA 2	29.95
2758	-JACKSON HOLE- DATA 1	29.95
2455	-MARS SCAPES	29.95
2757	-WESTERN U.S.	29.95
4893	VISTA PROFESSIONAL 3.0	59.95

CLIP ART DISKS

3745	PRO FILLS 2	34.95
2821	SOFTCLIPS VOL I CLASSIC	44.95
2781	SOFTCLIPS VOL II PEOPLE	44.95
2948	SOFTCLIPS VOL III COLLECT.	44.95
2957	SOFTCLIPS VOL IV ANIMALS	44.95
4207	VIDEO TOASTER: FLAGS OF THE WORLD	52.95

CAD

2659	DYNA CADD	CALL
4853	DYNA CADD 2D	199.00
1267	INTROCAD PLUS	64.95
3649	PRO BOARD/NET PACKAGE VERSION 2.0B NTSC/PAL	289.00

PAINT/DRAW SOFTWARE

4662	ART EXPRESSIONS	169.00
4096	DELUXE PAINT IV V4.1	99.95
4633	DELUXE PAINT IV AGA	109.95
4248	PROFESSIONAL DRAW 3.0	129.00

PAL SPECIFIC VIDEOSOFTWARE

4270	BROADCAST TITLER II SUPER HIGH RES PAL	279.00
3880	IMAGINE 2.0 PAL	299.00
3985	VISTA PROFESSIONAL 2.0 PAL	64.95

UTILITY/MISC.

BACKUP/COPY SOFTWARE

4911	RAW COPY 1.3M	36.95

TELECOMMUNICATIONS SOFTWARE

1788	A TALK III	42.95
4684	BAUD BANDIT II	29.95
4605	CNET V2.4 BBS	84.95
1875	MINDLINK TELECOM	28.95
3009	ONLINE PLATINUM	39.95
4153	SUPRA GP FAX SOFTWARE	74.95

DOS TOOLS/UTILITIES

4222	AMI BACK 2.0	44.95
4928	AMI BACK TOOLS	49.95
4410	ASDG ADPRO JX-100 MODULE	84.95
0120	BAD DISK OPTIMIZER 4.1	24.95
4332	CROSS DOS 5.0	39.95
4729	DIRECTORY OPUS 4.0	64.95
3200	DISKMASTER II	42.95
2341	DJ HELPER	29.95
4463	GIGAMEM	82.95
4933	HYPERCACHE PROFESSIONAL	34.95
0694	MAC 2 DOS	90.95
4363	MAVERICK 5.0	27.95
4124	QUARTERBACK 5.0	44.95
1847	QUARTERBACK TOOLS	52.95
4978	STUDIO PRINTER SOFTWARE	64.95
4955	SUPER DJ 550C	32.95
4940	TURBO PRINT 2.0 PROF.	79.95

MUSIC

GENERAL MUSIC SOFTWARE

0863	BARS AND PIPES	19.95
4718	BARS AND PIPES PROF. 2.0	239.00
3359	B & P CREATIVITY KIT	32.95
1270	B & P INTERNAL SOUNDS KIT	32.95
1751	B & P MULTI MEDIA KIT	32.95
1271	B & P MUSIC BOX A	32.95
1750	B & P MUSIC BOX B	32.95
3352	B & P PRO STUDIO KIT	32.95
1596	B & P RULES FOR TOOLS	32.95
3890	PATCHMEISTER	49.95
1260	PIXOUND	56.95
3507	SONIX	51.95
4759	SUPER JAM! V1.1	89.95

SAMPLING SOLUTIONS/MUSIC HARDWARE

3348	GVP DIGITAL SOUND SAMPLR	79.95
4689	ONE STOP MUSIC SHOP	599.00
4504	PERFECT SOUND 3.1	70.95
4041	SUNRIZE INDUSTRIES AD1012 12-BIT SAMPLER	529.00
4516	SUNRIZE INDUSTRIES AD516 16-BIT SAMPLER	1359.00
4157	SYNC PRO	179.00
3891	TRIPLE PLAY PLUS	165.00

PROGRAMMING SOFTWARE

9010	AMIGA VISION	49.95
3165	AMOS THE COMPILER	45.95
4413	AMOS THE CREATOR NORTH AMERICAN VER.	64.95
4534	AMOS PROFESSIONAL	89.95
3229	AMOS 3D	42.95
9965	AZTEC C DEVELOPERS SYSTEM PLUS SDB	195.00
2687	AZTEC C PROFESSIONAL	129.00
4525	CANDO 2.0	124.00
0078	CAPE 68K ASSEM 2.5	52.95
6654	CYGNUSED PROF. REL. 2	58.95
4512	EASY AMOS W/BOOK	39.95
4882	HELM	99.95
3924	HISPEED PASCAL	109.00
3264	INOVATOOLS II	59.95
3964	JFORTH PROFESSIONAL 3.0	135.00
4439	REXX PLUS COMPILER	119.95
4334	SAS/C DEVELOPMENT SYSTEM VER. 6	269.00
2850	TURBOTEXT	64.95

TAPES/TUTORIAL

2829	ANIMATION 101	24.95
3160	DCTV...A GUIDED TOUR	26.95
3676	DCTV...A GUIDED TOUR PAL	26.95
3512	DELUXE PAINT 4 VIDEO GUIDE	19.95
3617	DELUXE PAINT 4 ADVANCED TECHNIQUES VIDEO	19.95
2543	IMAGINE: A GUIDED TOUR	26.95
2828	IMAGINE: A GUIDED TOUR PAL	26.95
4975	LIGHTWAVE:ESSENTIALS	34.95
4977	LIGHTWAVE:MODELLER	34.95
4976	LIGHTWAVE:SURFACES	34.95
4734	TAMING OF THE WAVE	99.95
	TOASTER ESSENENTIALS VIDEOS:	
4461	-ADVANCED TECHNIQUES	34.95
4460	-STEP BY STEP GUIDE	34.95
4458	-TOASTER CG	34.95
4457	-TOASTER PAINT	34.95
4379	VIDEO TOASTER MADE EASY	24.95
4961	VIDEO TOASTER 2.0 TUTORIAL	19.95

TAPES/GENERAL

2788	AMIGA PRIMER VIDEO	19.95
2937	AMIGA WORLD VIDEO ANIMATION VOLUME II	19.95
4559	BEYOND THE MIND'S EYE	14.95

BOOKS

4682	AMIGA DOS REF. MANUAL V.4	17.95
3372	AMIGA HARDWARE REFERENCE MANUAL	19.95
4339	AMIGA INTERN	32.95
	AMIGA ROM KERNEL:	
3501	-DEVICES	24.95
2093	-INCLUDES & AUTODOCS	29.95
4210	-LIBRARIES	29.95
2976	AMIGA USER INTERFACE STYLE GUIDE	19.95
4368	CIVILIZATION: THE AUTHORIZED GUIDE	13.95
4948	LEGEND OF KYRANDIA CLUE BK	7.95
4932	MASTERING AMIGA AMOS	26.95
4849	MASTERING AMIGA ASSEMBLY LANGUAGE	27.95
4848	MASTERING AMIGA SYSTEM PROGRAMMING	32.95
4846	MASTERING AMIGA WORKBENCH 2..0	24.95
4847	MASTERING AMIGADOS 2.0 VOLUME II	24.95
4424	SECRET OF MONKEY ISLAND II HINT BOOK	9.95

GAMES

ARCADE GAMES

1887	AWESOME	34.95
4685	BILLS TOMATO GAME	34.95
4616	CYTRON	29.95
3670	FANTASTIC VOYAGE	29.95
2914	GODS	26.95
4291	JAGUAR XJ-220	35.95
1749	KILLING GAME SHOW	26.95
4393	MAGIC POCKETS	17.95
4340	NOVA 9	24.95
4197	PINBALL DREAMS	27.95
4613	PINBALL FANTASIES	29.95
1770	PRINCE OF PERSIA	25.95
4396	PROJECT X	36.95
4580	ROBOCOP 3D	36.95
4470	SHADOW OF THE BEAST III	36.95
4676	SILLY PUTTY	35.95
2585	SPEEDBALL 2	26.95

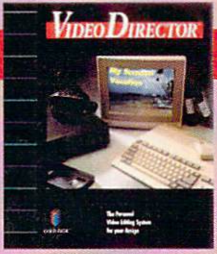
Gold Disk

PAGE SETTER 3 .... $54.95



- Entry level desktop publishing program from the creators of Pro Page
- Includes Hot Linked Text and Graphic Editors

4590



VIDEO DIRECTOR

- Complete Video Editing System for everyone with a camcorder, VCR and an Amiga!
- Quickly and easily catalog and edit the best moments from your video tapes!
- Includes hardware to control most camcorders and VCR's!

only $149.00 **3699**

Unleash the Power!

The Publishing Team with the Genie Edge
Buy the Bundle & Save a Bundle

Get Both for Only $239.00! **4730**

Professional Draw 3.0 $129.00 **4248**



Professional Page 4.0 $169.00 **3854**

HP DeskJet 500	HP DeskJet 550C (Color)	HP DeskJet 500C (Color)
$389.00	$749.00	$499.00
1740	60747	3367

SOUND MINDS — MUSIC SOFTWARE FOR

The One-Stop Music Shop

THE BLUE RIBBON SOUNDWORKS LTD

16-Bit, 32-voice, CD-quality, fully digital stereo audio for your Amiga.

$599.00 **4689**

Bars&Pipes Professional 2.0 .... $239.00 — New Version — **4718**

State of the Art MIDI Sequencing



PatchMeister ... $49.95 **3890**
Universal Patch Librarian

SyncPro $179.00 **4157**
SMPTE Time Code Reader/Generator

Triple Play Plus .. $165.00 **3891**
48 MIDI channels via one interface

SuperJAM! 1.1 $89.95 **4759**
Write music without ever touching an intrument

FREE BONUS!!!

Buy $100 worth of Blue Ribbon Products, get Who, What, When, Where, a personal organizer FREE!!!

Prices Effective April 1,1993

Circle 13 on Reader Service card.

Creative™ COMPUTERS

U.S. ORDERS ONLY:
800-872-8882
CANADA: 1-800-548-2512
4453 Redondo Beach Blvd.,
Lawndale, CA 90260

CUSTOMER SERVICE
310-214-0000
ORDER STATUS
Mon-Sat 8-6 PST
FAX: 310-214-0932

4740	STREET FIGHTER II	32.95
4281	TENGEN'S ARCADE HITS	26.95
4417	UTOPIA	32.95
4713	VECTOR STORM	26.95
4528	ZOOL	36.95
4852	ZOOL AGA	34.95

ACTION/STRATEGY

4723	ATRAIN	45.95
1658	BATTLE CHESS	31.95
3956	CASTLES	39.95
4618	CASTLES DATA DISK	19.95
4344	CIVILIZATION	45.95
0984	CLUE	14.95
4617	DISCOVERIES OF COLUMBUS	39.95
4397	HOOK	39.95
2642	LEMMINGS	29.95
3666	LEMMINGS DATA DISK	13.95
4906	LEMMINGS II- THE TRIBES	39.95
2754	MONOPOLY	16.95
2968	RAILROAD TYCOON	39.95
4215	ROBO SPORT	36.95
4020	SIM ANT	39.95
0508	SIMCITY	32.95
2712	SIMCITY GRAPHICS # 1 ANCIENT CITIES	16.95
2713	SIMCITY GRAPHICS # 2 FUTURE CITIES	16.95
4323	SIM EARTH	45.95
0010	TETRIS	14.95
4667	TRADERS	22.95
4739	WING COMMANDER	39.95

ADULT GAMES

7564	CENTERFOLD SQUARES	19.95
4358	LEISURE SUIT LARRY I ENHANCED	35.95
3386	STRIP POKER III	29.95
3387	STRIP III DATA 1	16.95
3388	STRIP III DATA 2	16.95
3389	STRIP III DATA 3	16.95
3390	STRIP III DATA 4	16.95
3965	STRIP III DATA 5	16.95
4423	STRIP III DATA 6	16.95

WAR/STRATEGY

4579	CAMPAIGN	36.95
4578	COMBAT CLASSICS	29.95
4702	CONQUEST OF JAPAN	39.95
4604	DIPLOMACY	26.95
1846	HARPOON	41.95
2663	HARPOON BATTLESET #3 MEDITERRANEAN CONFLICT	20.95
4297	HARPOON DESIGNER' SERIES	34.95
2838	HARPOON SCENARIO EDITOR	27.95
3244	HARPOON CHALLENGER PACK	62.95
4133	NAPOLEON	34.95
4589	NO GREATER GLORY	24.95
4121	PACIFIC ISLANDS	29.95
0577	POPULOUS	29.95
3720	POPULOUS II	38.95
4643	POPULOUS II DATA DISK	19.95
1845	POWERMONGER	33.95
3237	POWERMONGER WWI DATA	19.95
4889	ROME:AD92	39.95
4389	SPOILS OF WAR	36.95
3966	THE THIRD REICH	28.95
3260	WORLDS AT WAR	29.95

ROLE PLAYING

2569	BANE OF THE COSMIC FORGE	38.95
4828	BARD'S TALE CONSTRUCTION SET	32.95
2667	BARD'S TALE III THIEF OF FATE	34.95
3721	BLACK CRYPT	34.95
2674	EYE OF THE BEHOLDER	16.95
4017	EYE OF THE BEHOLDER II	38.95
4703	ISHAR:LEGEND OF FORTRESS	39.95
4917	LEGENDS OF VALOUR	44.95
4054	LOST TREASURES OF INFOCOM	45.95
4577	MEGATRAVELLER II	39.95
4647	PALADIN II	39.95
4295	TREASURES OF THE SAVAGE FRONTIER	19.95
4073	ULTIMA VI: THE FALSE PROPHET	49.95

FLIGHT SIMULATORS

4249	AIR SUPPORT	29.95
3233	BIRDS OF PREY	34.95
2967	F15 STRIKE EAGLE II	39.95
1819	F19 STEALTH FIGHTER	34.95
0115	FALCON	32.95
1839	FALCON MISSION DISK 2	19.95
4535	FIGHTER DUEL PROFESSIONAL	34.95
2551	FLIGHT SIMULATOR II	32.49
4700	GUNSHIP 2000	42.95
3791	KNIGHTS OF THE SKY	39.95
3246	MEGAFORTRESS: FLIGHT OF THE OLD DOG	39.95
4298	MEGAFORTRESS: MISSION 1	27.95
4299	MEGAFORTRESS: MISSION 2	27.95
3987	MIG 29: ACCOLADE	36.95
3760	RED BARON	19.95
3819	THUNDERHAWK	34.95
4547	TRACON II	38.95

GRAPHIC/ADVENTURE

4716	DARK SEED	39.95
4395	DUNE	39.95
2409	ELVIRA	26.95
3970	ELVIRA II	29.95
3710	HEART OF CHINA	39.95
4683	INDIANA JONES: THE FATE OF ATLANTIS	39.95
4815	KOSHAN CONSPIRACY	29.95
4623	LEGEND OF KYRANDIA	39.95
4527	LURE OF THE TEMPTRESS	34.95
3789	OUT OF THIS WORLD	39.95
4629	REALMS	24.95
4341	ROBIN HOOD: CONQUEST OF LONGBOW	38.95
4136	SECRET OF MONKEY ISLAND 2	38.95
4635	SHADOW LANDS	34.95
2915	WONDERLAND	19.95

SPORTS ENTERTAINMENT

0961	BRIDGE 6.0	25.95
3756	GRETZKY HOCKEY 2	42.95
1842	INDIANAPOLIS 500	34.95
4048	LINKS GOLF	39.95
4195	LINKS DATA DISK BOUNTIFULL COUNTRY CLUB	17.95
4196	LINKS DATA DISK FIRESTONE COUNTRY CLUB	17.95
4675	LOTUS III	35.95
4677	NIGEL MANSELS GRND PRIX	39.95
4641	ROAD RASH	34.95
4520	SOLITAIRE'S JOURNEY	38.95
4627	TOM LANDRY FOOTBALL	32.95
4738	TV SPORTS BASEBALL	34.95
4973	TV SPORTS BOXING	24.95
3973	WORLD CIRCUIT GRAND PRIX	39.95

CDTV TITLES

2922	AMERICAN HERITAGE DICTIONARY	49.95
3368	AMERICAN VISTA MULTIMEDIA US ATLAS	59.95
4374	CONNOISSEUR OF FINE ARTS	29.95
4053	FANTASTIC VOYAGE	29.95
4159	FRED FISH BBS ONLINE	48.95
2794	FRED FISH COLLECTION	48.95
4708	GIFFS GALORE	19.95
3191	HOUND OF THE BASKRVILLES	39.95
3167	ILLUSTRATED SHAKESPEARE	34.95
3164	LEMMINGS	36.95
2798	MY PAINT	29.95
3879	NASA: THE 25TH YEAR	19.95
4511	SHERLOCK HOLMES: THE CONSULTING DETECTIVE	44.95
2779	WORLD VISTA	39.95

ACCESSORIES/MISC

——	CABLES FOR MOST NEEDS USES AVAIL.	CALL
——	DUST COVERS AND KEYBOARD SKINS AVAIL.	CALL
6501	FLICKER MASTER	12.95
4543	HYPER MOUSE PAD	11.95
——	KEYBOARD TEMPLATES FOR TOASTER CG, TOASTER SWITCHER, DCTV & DPAINT IV FOR AMIGA 500/2000/3000	CALL
4440	STAR TREK MOUSE PAD 10 X 10	13.95
4441	STAR TREK: NEXT GENERATION MOUSE PAD	13.95
4634	STAR TREK: NEXT GEN. CREW MOUSE PAD	13.95
4832	X-TRACTOR PLUS	11.95



HyperCache Professional
- Accelerates AmigaDos storage devices by up to 2200%
- KickStart compatible 1.2 - 3.0

$34.95 — 4933



DeluxePaint IV
The King of Paint and Animation
ELECTRONIC ARTS®

Version 4.1 — 4096 — $99.95
New AGA Version — $109.95 — 4633



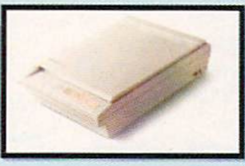
Epson® Printers AP-3250
Epson is a registered trademark of Epson America

24-Pin printer $209.00 — 4606



ProWrite Version 3.3 ..... $59.95
4406
- Supports Hotlinks
- 100,000 word Spell Checker.
- Thesaurus with 300,000 word cross reference.

Epson® Scanners
ES-600C - 24-Bit, 300 DPI .... $849.00 — 4664
ES-800C - 24-Bit, 400 DPI .... $1199.00 — 4665

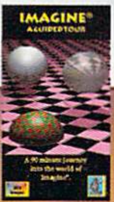


ASDG Epson Scanner Driver Software when purchased with scanner 99.95

Epson is a registered trademark of Epson America — 2953

Imagine Bundle!
Imagine plus Imagine: A Guided Tour video





$79.95 — 4208
Includes free object disk and you can upgrade to 2.0 for $100!

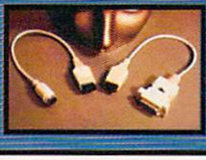
Best-Selling Entertainment Software



Street Fighter II $34.95 — 4740



Wing Commander $39.95 — 4739



Digiprint, Inc.
Analog Joystick Interface $13.95 — 4548
IBM Bus Mouse Interface .. $13.95 — 4597

Prices Effective April 1,1993

The Creative Computers Low-Price Guarantee.

Creative Computers *is* the service and low-price leader and the largest Amiga mail-order company. Check out the prices in this ad, then in the unlikely event that you find a lower price anywhere else in this magazine, we'll beat it!***

10 reasons why you should only buy from Creative Computers!

- The largest Amiga mail-order company by far!
- The largest and best Amiga computer dealer (authorized by Commodore)
- The largest and best Amiga Service & Tech Support center.
- The largest selection, the best service
- The best prices!
- The fastest delivery (overnight service).
- Money-back guarantee, see separate MBG rules.
- The first Amiga authorized mail order company.
- Fastest order-entry system, so you wait less on the phone!
- The most knowledgeable salespeople who can offer you assistance in selection, system configuration, etc.

Overnight Delivery Only $6.95*

Order by 5:00pm EST and get your order tommorow!

*For what other companies charge for ground service that may take up to 9 days

FEDERAL EXPRESS

- Offer is valid thru Apr. 30th, 1993 and applies to in stock items only. Continental U.S. only.
- Credit card problems, system problems, Acts of God, shipping to a different address than your billing address, and orders shipping to some rural areas or small cities will incur additional processing and shipping time.
- Orders over 3 lbs. incur additional shipping charges.
- Does not include insurance.

The Creative Computers Exclusive Money Back Guarantee Program

(CC-MBG)

When you purchase any accelerators, floppy drives, memory expansions, an OpalVision, hard drives and hard drive controllers or any GVP Hardware from Creative Computers, you are protected by a full 30-day, No-Questions-Asked Money Back Guarantee!

Are you in the market for a GVP Accelerator but don't know if it will work right with your set-up? Or are you waiting for your Amiga to compute but don't know what an accelerator will mean in practical terms to you? You need not wait any longer. Just buy it from us, and if you don't like it, send it back for a full refund!

OUR POLICIES

CC-MBG rules: Limited-time offer expires 2/31/93 and only applies to the above listed categories only. You must call Customer Service to obtain a Return Authorization number before sending the item(s) back. The item(s) must be in original condition and in original packaging, with blank warranty card. No damaged items will be accepted. Refunds issued within 14 days of receipt of the returned item(s). Refund is limited to $3,000 per customer. No refunds on freight or labor charges. CUSTOMER SERVICE: for tech support call 310-542-2292 from 11 a.m. to 7 p.m. PST. ***"Standard Overnight Service" by Federal Express is not available in all areas. Those "Extended Areas" take two days. Check with your local Federal Express station for delivery confirmation and delivery times. COD's add $6-No Personal /Company checks. Call for all other shipping information. Educational, corporate and aerospace purchase orders accepted. All advertised prices are CASH prices. Visa/ Master Card same as cash; Discover add 1%. RETURN POLICY: Call Customer Service at (310) 214-0000 for return authorization. All returns without authorization number (RMA#) will be refused. Returned products must be in original condition and packaging and must be sent back within 30 days of our invoice date. No refunds, please. Defective product exchanges only. We make no guarantees for product performance. Exchanges with unlike products are at our option and subject to a 20% re-stocking fee. CONDITIONS: Prices and availability of product are subject to change without notice. MAIL-IN ORDERS: Send money orders or cashiers check for fastest service. Personal checks - 10 days to clear. Include: Name, Address and telephone number (no P.O. Boxes, please). If ordering by credit card include expiration date and billing address. Call for exact shipping rates. INTERNATIONAL TOLL FREE ORDERING POLICIES: For Canada, FPO, APO - Minimum order $50. All other countries: minimum order $100. For VISA and Master Card orders you must FAX or mail a signed photocopy of your credit card - front and back. Please have your credit card number ready before calling. INTERNATIONAL PHONE NUMBERS: Orders only please. Canada 1-800-548-2512; Italy 1678-74086; United Kingdom 0800-89-1178; France 0590-1099; Australia 0014-800-125-712; Switzerland 046-05-3420 ***PRICE GUARANTEE: U.S. Only. Applies to all merchandise advertised by all authorized Amiga dealers except merchandise on sale and out-of-stock. We will give you our "delivered" price lower than the other authorized Amiga dealer's "delivered" price.

VISA · MasterCard · American Express · Discover

Overnight Shipping via: FEDERAL EXPRESS

ORDER BY PHONE -OR- MAIL IN THIS FORM

ORDER FORM

1. Call for most current prices and shipping rates.
2. Mail this order form to:
   CREATIVE COMPUTERS at: 4453 Redondo Beach Blvd., Lawndale, CA 90260
3. Credit card orders only shipped to billing address.

Name ______________________
Address ______________________
City ______________ State ______ Zip ______
Country ______________________
Day Phone# ( ) ________ Night Phone# ( ) ________

QTY.	PRODUCT NAME	UNIT PRICE	TOTAL
		8.25% SALES TAX (CA. RES.ONLY)	
		SHIPPING	
		TOTAL	

SHIPPING METHOD: (Call for rates)
☐ UPS Ground ☐ Federal Express
☐ DHL -International orders
☐ Other________________

OFFER CODE: P331MG14

Method of Payment: ☐ Check ☐ Money Order ☐ Visa ☐ MasterCard ☐ American Express ☐ Discover

CREDIT CARD USERS ONLY:

Credit Card # ______________ Exp. Date ___/___
Signature ______________________

Prices Effective April 1,1993

ACCENT ON GRAPHICS

Fun & Games With DTP

51

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

MANY AMIGA ARTISTS have never really explored the world of desktop publishing. I have fallen completely in love with it, although I confess I use it primarily for gags, fun, and hoaxes. (A few of my "SAND FIRE WARNING" signs can still be seen on bulletin boards in Death Valley.) If you are new to DTP, perhaps this column will give you an overview of some fun ways you can get involved.

Desktop-publishing software lets you create professional-looking page layouts on your home computer. You can combine text, images, and other graphic elements with powerful control over size, composition, type style, and so forth. You can then print your page at any resolution your printer supports. This means that you can bypass the layout services of a print shop and produce high-quality ads, newsletters, reports, and so on at your computer. If you own a laser printer, you can print fairly nice versions of these at 300 dpi. A service bureau, of course, can print them at much higher resolutions for truly professional results.

Most desktop-publishing programs share similar features. The accompanying illustration shows the interface of Soft-Logik's PageStream 2.21. That particular version has been attractively updated and streamlined. It is smooth to work with and easy to learn. The illustration shows a magnified area of the page; the tools on the right and menu bar above contain a multitude of convenient features you can utilize to create and modify clean page layouts. Shown here are two examples of mixed text and graphics such as you might use in a letterhead or business logo.

PageStream, Professional Page (Gold Disk), and other DTP programs come with several basic fonts included. More exotic display fonts such as the ones shown here are available from other sources and can be great fun to play with. Fonts are available in public-domain collections, online via modem downloads, and in commercial packages. One particularly good source of display fonts is Allied Studios (see p. 92 for address and phone number), which supplies bundles of fonts for both PageStream and Pro Page at reasonable prices. The variety should be enough to keep any font-hungry desktop designer satisfied for some time. *(Editor's Note: **AW** is presenting a comprehensive, two-part Buyer's Guide to Amiga Fonts, beginning with DTP fonts in this issue, p. 43.)*

If you use a lot of these complex display fonts, however, you may find that your printer refuses to process the page. This can usually be remedied. In PageStream, for example, you can bring up the Configure Printer requester from the Global menu. Enter "auto-unload" under Special and select the Save Default button. Each font will be dumped from the printer memory when a new font loads.

"Zing Went the Strings of My Art . . ."

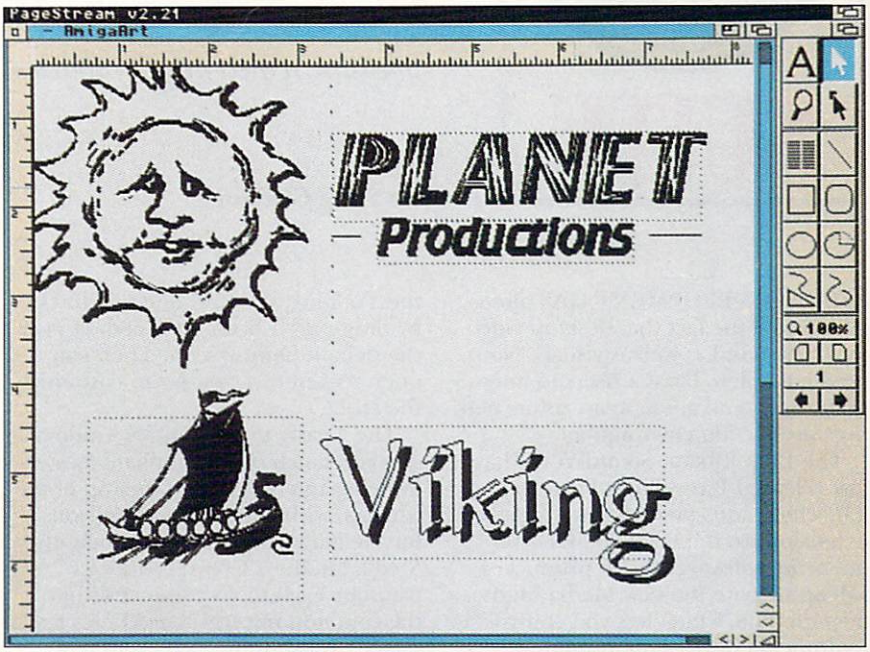
Typefaces are not always letters of the alphabet. Fonts such as Zingers, Dingbats, Ornaments, and other special sets have ornate pictures, symbols, and border designs in place of letters. The Viking ship in the illustration, for example, is typed to the screen when you press the u key in one of Allied's Zinger fonts. Having a selection of these clean little graphic spots available as fonts is often handier than sorting through disks of clip art.

The sun image in the Planet Productions logo was created using techniques discussed at greater length in Accent #43 (see Sept. '92, p. 44). The sun was drawn in DeluxePaint's (Electronic Arts) high-resolution mode, then converted to a scalable PostScript object using the Trace program included with Gold Disk's Professional Draw. This gives an interesting "woodcut" character to the printed image that is difficult

Whether for serious business purposes or just for a little light-hearted diversion, specialized desktop-publishing projects can be a lot of fun.

to achieve with standard drawing software. The ability to convert painted or scanned line art into clean, high-resolution printed graphics is a powerful feature of desktop-publishing operations that can become addictive to any computer artist.

There are also many materials available now to DTP artists that expand the options at the printout stage. Paper companies are paying attention to the growing phenomenon of desktop publishing and are producing preprinted and die-cut stock suitable for laser printers. You can even buy packs of paper printed with marble texture, color gradients, headlines, and a variety of colorful designs ready to run through your laser printer or copier. You can buy laser-ready adhesive backed labels in a variety of sizes and shapes. Also available at paper supply outlets are die-cut laser sheets of Rolodex cards, doorknob hanger signs, badge making kits, and other specialty items.



This screen from PageStream shows a magnified area of a page layout. Display fonts and the Viking ship are from Allied Studios collections. The sun image was painted in DPaint and then converted to a scalable object with Pro Draw's Trace program.

An even more unique option you might want to try is the hot-foil effect. Allied Studios and other sources sell packs of a special foil designed to be used with laser printers and most copiers. A piece of the special foil can be fastened to a laser printout and run through the machine a second time. The heat and pressure of the rollers causes the foil to adhere only to the printed areas. The unused foil is simply peeled off. You have to see this effect to believe it. My favorite variation is the hologram diffraction foil. For either business or fine-art experiments, this is an amazing trick. Be aware, however, that while using foil is a proven technology, it is not what laser printers were intended to do—so be cautious.

If you put your imagination to work, there really are no limits to the kinds of fun projects possible with an Amiga, DTP software, and a laser printer (even dot-matrix results looks pretty good.) Anything you do looks official. You can crank out fortune-cookie messages, signs for your kid's door, personalized jam and pickle labels, KGB letterheads, bumper stickers, Foreign Legion draft notifications . . . the mind boggles. Every now and then I attend a conference where I want to have a business card containing information relevant to that particular situation. In an hour on my Amiga I can whip out a few sheets of unique cards or letterheads for the occasion. Tricks like the hot-foil effect are perfect for these limited special runs.

Back in the gag department, you could try using the ideas mentioned here to print fake can labels of Klingon Chile (or whatever) and glue them over real cans from the supermarket. I have spent some fine afternoons hanging around the generic-food aisle watching people's reaction to a stack of corn cans I bought, relabeled, and then slipped back onto the shelf. The ultimate satisfaction is hearing a checker's voice over the loudspeaker asking, "Price check on Anteater Surprise?" ■

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope for a reply.



Adding Sound Simply

At last, desktop-video production embraces audio—without requiring acrobatics.

By Steve Gillmor

AMIGA DEVELOPMENT HAS often overlooked the fact that desktop video includes sound as well as visuals. Now, new tools allow Toaster users to integrate video and audio in an automated post-production environment.

The Blue Ribbon SoundWorks has just released Bars&Pipes Professional 2.0, which adds powerful multimedia extensions to the original MIDI-sequencing software. Video producers will appreciate the new Media Madness module, which lets you control multimedia devices on unlimited, simultaneous tracks alongside the music. Add Blue Ribbon's One-Stop Music Shop 16-bit E-Mu sampler-on-a-card ($649) and SunRize Industries' Studio 16/AD516 stereo digital-audio system ($1495) and you have all the elements under Bars & Pipes' timeline control.

Media Madness supports many devices and formats directly (see "A Show of Strength," Apr. '93, p. 30, for details), and its Command Performance tool can control others via ARexx and the serial port. We'll limit this discussion to the Toasty tool, which controls Toaster transitions, and the SunRize Virtual Track tool.

On Top of Ol' Toaster

The Media Madness window integrates multimedia tools into Bars&Pipes, displaying each track horizontally as a timeline with vertical SMPTE (hours, minutes, seconds, frames) or music time reference marks. Unlike Bars&Pipes' main Track window where you can place multiple tools, each Media Madness track holds just one tool. After installing the tools you need in the Toolbox, you add one to a track by dragging it from the Toolbox over the default Output icon. Then you open its Control window to customize the tool.

The Toasty tool's Control window displays much of the familiar Toaster Switcher interface along the top of the window, with names replacing icons for the banks of Switcher commands. Media Madness Control windows translate each tool's commands into the common musical Bars&Pipes language by assigning each event to a specific MIDI note. The Hit List Translation mechanism gives a textual description to each note; in the Toasty tool's case, C5 becomes Shatter or Sheep, C#5 is Smooth Fade or Tear Page, and so on. Each note can have up to six Toaster commands, so you can bunch related commands to set up your Program and Preview video inputs, for example, or choose a transition and activate it with the Auto command. It's a good idea to assign multiple transition sequences to individual notes in the Control window, and then save each group of effects in a catalogue by copying the Toasty icon to one of eight Tooltrays. This way, you can skip the setup next time, and simply drag a prepared Toasty icon from a Tooltray to a new track.

You can test your transitions while in the Control window via the Test button. When you are satisfied, close the Control window and click on the Pencil icon in the Media Madness window. Now, simply click to add events on the timeline of your Toasty track. You can change to a Hand icon to move existing events, an Eraser icon to remove them, and so on. All the Bars&Pipes Transport controls are active, so you can move to the main Track window and play the events by clicking on the VCR-like Play, Fast Forward, Rewind, and Stop buttons. More convenient is the Mini-Transport window, which you can summon with the m key. Because you can synchronize Bars&Pipes with external devices via SMPTE time code, you can also start and stop Media Madness tracks externally.

Set For Sound

SunRize's AD516 digital-audio board with companion Studio 16 2.0 software is one source for SMPTE time code. The AD516 is a 16-bit stereo card allowing up to eight channels of simultaneous playback. Its internal SMPTE time-code reader allows it to create extensive Cue Lists of samples to trigger to a videotape. The Studio 16 software lets you record, edit, and play back CD-quality stereo sound.

SunRize and The Blue Ribbon SoundWorks have collaborated to allow complete control of the AD516 from within Bars&Pipes. ARexx commands can also be sent to initiate recording, load and play samples, and set volume and panning levels. We'll use the Media Madness SunRize Virtual Track tool to integrate the AD516, in conjunction with Bars&Pipes' Mix Maestro automated mix-down feature.

Mix Maestro gives you real-time control over volume and stereo-panning levels by recording MIDI-control changes on a track. You can go through each track in your song, setting the various levels and stereo positioning of your instruments to ►

optimum levels; the same holds true for AD516 samples. With the Virtual Track tool, you can add tracks for a lead vocal, voice-over, or multitrack mix down of audio dubbed from videotape—all synchronized with MIDI musical events and Toaster transitions. To illustrate, I'll detail the steps necessary to coordinate an audio/video transition between two sequences—a procedure you might use several times for a typical production.

TEAM EFFORT

Because the Toaster disables multitasking while performing Switcher effects, the rest of your Bars&Pipes performance halts during Toaster transitions. A remedy for this is SunRize's Toaster Handler, which replaces your existing AD516 device driver and allows you to play one or two tracks while performing a Toaster effect. A more powerful approach is to assemble your final video in two passes, first with Toaster visual transitions and then with the audio mix. Better still, you can coordinate two Amigas, which I'll return to later.

For now, let's assume you have a video-editing setup that allows you to record video on one pass and audio on a second. I use Sony Hi8 Vdecks that I can control using serial commands sent by the Command Performance tool. Blue Ribbon's One-Stop Music Shop not only gives you 16 channels of 16-bit multitimbral stereo sound, but also a MIDI interface for attaching a synthesizer keyboard. This frees up the serial port for triggering the Vdecks or another Amiga.

A word about SMPTE: There are many ways to record and synchronize consumer, prosumer, and professional VCRs. Some machines have an additional third linear track just for time code. Others allow you to overdub on hi-fi tracks without erasing the original video, while a common low-end solution is to use one channel for time code and the other for a mono mix down. In all cases the outcome is the same: SMPTE time code recorded on a track that triggers Bars&Pipes. I use the Studio 16 expansion module SMPTE Output, which employs your Amiga to generate time code for recording on your VCR audio track. Connect the VCR SMPTE audio output to the AD516 SMPTE-In jack, which passes the time code on to Bars&Pipes via the SMPTE accessory module. Bars&Pipes then performs the song under SMPTE control, in turn triggering MIDI music, Toasty transitions, and SunRize audio events when the time code reaches the appropriate points on the timeline.

First, preview and lay down the visual transition between your two scenes: a smooth, three-second fade from source A to source B. Next, add a Virtual Track tool, designating the recording start time at the same point the Toasty effect begins. Just as in a regular MIDI track for Bars&Pipes Pro, the Virtual Track tool's track must be in Record mode and the Record button in the Transport Controls must be set for recording to occur. Click the Play or Play From Beginning buttons and record source A's audio for the three seconds, pressing Stop to end recording. Repeat the same tasks with a second Virtual Track to record the source B audio. If you select both L and R buttons on the set-up panel, stereo samples are recorded with the Left sample panned full left and the Right at full right. Set both Virtual Tracks for playback and use Studio 16 editing tools to clean up the samples if needed.

Finally, bring up the Mix Maestro window, which displays level faders equal to the total number of tracks in the performance. Since you can perform a mix down on only one track at a time, you should first set the source B volume to 0 and use the Mix Maestro menu's Snapshot selection to set initial values for the track. Now we'll begin playing back the tracks, first fading down the source A audio where the transition occurs. When you play it back, you will see that the fade has been recorded and is automatically performed each time. Next, fade in source B to complete the audio dissolve. If you like, add a third Virtual Track, and record a digital bounce-down of the mix if you need to save RAM, or just let Mix Maestro replay the mix as you insert the new audio on your VCR's audio track(s).

ON AUTOMATIC

Other Bars&Pipes features let you configure and store sets of tracks to automate this procedure. To demonstrate this, first let's store a Smooth Fade transition on the C5 note in the Toasty track, and add a Branch Out tool on the same track (1) in the main Track window. (Both the Media Madness and Track windows are active at the same time; actions taken in one are mirrored in the other.) The Branch Out tool sends a duplicate of each event that enters it down a connecting pipe to another pipeline, in this case our first Virtual Track on track 2. Add a Merge tool on track 2 to receive the duplicate events, then double-click on track 2 to enter the editor. Select Control Change from the Show menu, choose Control Change #... in the Display menu and set the requester to Controller 7, use the Pencil to draw a fade-in from zero to full volume, and cut the results to the Clipboard.

Drag a Loop tool from the Toolbox to track 2, placing it after the Merge tool, and open the Loop Control window. Select Paste From Clipboard from the Tool menu to paste the fade-in changes, and choose Trigger from the Performance menu. In the Loop Control window, set the Root note to C5 (same as the Toasty event). Finally, add a Branch Out icon after the Loop tool on track 2, and another Merge tool on your second Virtual Track on track 3. Place a ControlInverter tool after the Merge tool (this turns a 0 volume Control Change into a 127, and so on, with a fade out as the result). Holding the Shift key, click once on each track to select them, then choose Save Group from the Group menu. Now you have your dissolve sequence available at any time: Simply load the grouped tracks, establish the SMPTE time where the transition begins in your Toasty track, and set your Virtual Tracks to play the samples at the appointed time. You can record new samples in this configuration; the volume control changes are in effect only during playback.

If you have a second Amiga, you can install the One-Stop Music Shop and the SunRize AD516 with Bars&Pipes and communicate with your Toaster-equipped machine through the serial ports via a null-modem cable. Run the Toaster Receive utility on the Toaster machine and set the Local/Remote button to Remote in the Toasty tool's Control window. Now you can preview and perform Toaster transitions, SunRize sample sequencing, and One-Stop Music Shop MIDI performances simultaneously, mixing in one pass to tape. You can take advantage of repeatable A/B roll editing to construct your productions with second-generation "work prints," then go back when you've got everything just right and work from your original tapes. ■

Steve Gillmor has produced and directed films, audio recordings, and radio and television programs. He enjoys bringing professional-level technology to his Amiga.

Since 1982

ComputAbility

Consumer Electronics

800-554-9980

HARD DRIVES

Quantum

2 year warranty!

ELS 42 IDE / SCSI	$139 / $169
ELS 85 IDE / SCSI	$189 / $199
ELS 127 IDE / SCSI	$245 / $269
ELS 170 IDE / SCSI	$265 / $299
LPS 240 IDE / SCSI	$359 / $399
LPS 525 IDE / SCSI FREE DEL	$989 / $999

Seagate

1 year warranty!

ST-251-1 MFM	42.8MB	28MS	$205
ST-351A IDE	42MB	28MS	$135
ST-3120A IDE	106.9MB	16MS	$189
ST-3144A IDE	130.7MB	19MS	$205
ST-3243A IDE	214MB	16MS	$295
ST-3283A IDE	245MB	12MS	$345
ST-3283N SCSI	245MB	12MS	$419
ST-9144A IDE 2.5	120MB		$315
ST-9096A IDE	80MB		$225

Maxtor

1 year warranty!

IDE 7120 / 7170	$219 / $255
IDE 7213 / 7245	$309 / $319
IDE 7345	$549
SCSI 7120 / 7213	$239 / $329
SCSI LXT 340 - FREE DELIVERY	$609
SCSI 540SL - FREE DELIVERY	$1,049
SCSI 1240S - FREE DELIVERY	$1,569
25128 IDE, 120MB, 2 1/2"	$329

CONNER

The Storage Answer.

CP3000 / CP60064H IDE	$145/$169
CP30084E / CP30104H IDE	$179/$219
CP30174E / CP30204 IDE	$255/$315
CP30254 IDE	$339
CP30080E SCSI	$189
P30170E SCSI	$269
CP30200 SCSI	$339

AMIGA 500 UPGRADE KIT

MASTER 3A-1Disk Drive with Golden Image Ram 500 with Clock/Calender

$99 *LOWEST PRICE EVER!*

CONTROLLERS

IVS

SCSI Internal:

Trumpcard Pro 2000	$142
Grandslam 2000 OK Exp-8MB	$229

SCSI External:

Trumpcard Pro 500	$225
Grandslam 500 OK Exp-8MB	$287

IDE External:

Trumpcard 500 AT OK Exp-8MB	$172

GVP

HC8 Series II OK Exp-8MB for 2000, SCSI Internal	$165

ICD

AD IDE 40 Kit for A500, IDE External	$119
AD IDE 40 Kit with AD speed for A500, IDE. Internal	$299
ICD Trilecta EC 2000 8/0 IDE	$155
ICD Trilecta LX 2000 8/0 SCSI/IDE	$175

Expansion Systems

Data Flyer 2000 SCSI Internal	$77
Data Flyer 500, SCSI External	$133
Data Flyer 2000, IDE Internal	$73
Data Flyer 500, IDE External	$127

THE MIRACLE

PIANO TEACHING SYSTEM

State-of-the-art electronic keyboard, Amiga software and artificial intelligence music technology work together to create the perfect teaching program!

Exclusively from ComputAbility: Get Song Library 1 & 2 FREE!



$319

PRINTERS

EPSON

Action Printer 3250	$189
Action Laser 1000 512K/2MB	$635/719
Action Laser 1500	$779
Stylus 800 Ink Jet	CALL
LX 810	$169
FX 870 / 1050	$269 / $355
FX1170	$345
LQ 570 / 870	$235 / $425
LQ 1070 / 1170	$345 / $579
LQ 2550	$875
EPL 8000	$1,059
DFX 5000 / 8000	$1,269 / $2,139

Panasonic

KX-P 2123 / with Color Kit	$229/$279
KX-P 2124 / with Color Kit	$299/$349
KX-P 2624	$359

star

NX 1001 Multifont	$135
NX 1040 Rainbow NEW	$159
NX 2420 Rainbow	$269
NX 2430 Black	$215
LS - Laser Printer (toner cartridge extra) 5 / 5EX / 5TT	$615 / $749 / $979

NEC

Silentwriter:

M95, 6ppm Postscript	$1,349
M95fx (M95 but with fax)	$1,849
M97, 10ppm Postscript	$1,689
M97fx (M97 but with fax)	$2,169

Primera

COLOR PRINTER

Color, high resolution thermal transfer printing, great for presentations	$739

GVP

FREE DELIVERY on all Hardware!

We carry the complete GVP line. CALL US - our prices are too low to advertise!

GVP SPECIALS!

IV24 2.0 only $1,199

includes:Caligari 24, MacroPaint 2.0, Desktop Darkroom and MyLAD, the all in one time tested video adpator for the Amiga; GVP's IV24!

PhonePak only $299

Turn your A2000, 3000 or 4000 into a telecommunications powerhouse! Experience the versitality of PhonePak's integrated voice-mail, fax and answering machine capabilities!

A530-Turbo $499

Includes: 40MHz, 1MB 32-bit RAM, 40MB Quantum HDD, and PSU

ALSO AVAILABLE:

A530-40/0/1/80Q	$649
A530-40/0/1/120	$699
Image FX	$199
G-Lock	$399
A1230-40/40/4MB	$599

Call for other accelerators

CALL!

Call our expert system integrators to custom design an Amiga desktop video system to fit your needs!

- VIDEO TOASTER
- PERSONAL TBC III
- DC TV
- AMI-LINK
- PERSONAL VSCOPE

PRODUCTIVITY

3D Objects Vol II for Imagine	37.95
Aladin 4D	249.95
Ami Back 2.0	44.95
Ami Back Plus Tools	67.95
Ami Back Tools	42.95
AMOS	54.95
AMOS 3D	39.95
AMOS Compiler	29.95
AMOS EZ	34.95
AMOS PRO	77.95
Animation Workshop	51.95
Arexx	27.95
Arexx Cookbook	32.95
Art Department Pro 2.1	147.95
Art Department Pro Conversion Kit	47.95
ASDG Art Department Pro 2.1	147.95
ASDG Art Department Pro Conv. Pack	57.95
ASIM CDR File System	48.95
Atalk III	39.95
AudioMaster 4	54.95
Audition 4	57.95
BAD 4.0	29.95
Bars & Pipes Pro	194.95
Internal Sound Kit	36.95
Baud Bandit	28.95
Blitz Basic 2	51.95
Caligari 24 (Reg. 2 MB)	244.95
Can Do 2.0	114.95
CNET 2.0	72.95
Comic Art Disks each	22.95
Comic Setter	41.95
Cross DOS 5.0 version	33.95
Cross DOS 5.0 PLUS	32.95
Cycleman	34.95
Deluxe Music II	49.95
Deluxe Paint 4.1 while supplies last	104.95
Deluxe Paint AGA	114.95
Deluxe Print II	51.95
Directory Opus 4.0	56.95
Disk Master II	34.95
Disney Animation Studio	42.95
Distant Suns Version 4.1	52.95
Dos 2 Dos	30.95
Excellence 3.0	51.95
Exotic Cars Volume 1 & 2 Imagine	29.95
Exotic Cars Volume 1 & 2 Lightwave	29.95
Fairbrother's Audio Gallery:	
Chin,Jap,Russ,Korean each	54.95
French, Spanish, German each	49.95
Final Copy II	79.95
Font Pack 1 for Broadcast Titler	99.95
High Speed Pascal	92.95
Home Office Advantage	124.95
Image Master V.2.0	127.95
Imagine 2.0	239.95
Imagine 2.0	174.95
Imagine 3D Objects Vol II	37.95
Imagine Exotic Cars Vol 1 or 2	29.95
Imagine Humanoid	134.95
Imagine Master Pak1	127.95
Imagine Morphus	64.95
IntroCAD Plus	41.95
LightWave Broadcast 3D Fonts	67.95
LightWave Broadcast Titler 2.0	189.95
LightWave Extotic Cars Vol 1 or 2	29.95
LightWave Font Pak 1-3 each	187.95
LightWave Master Pak 1-3 each	74.95
LightWave Masterpiece 3D Fonts	54.95
LightWave Motion Man	104.94
LightWave ProPak	
Masterpiece 3D Fonts for Lightwave	54.95
Masterpiece Toaster Fonts	54.95
Maverick	24.95
Morph Plus	144.95
Morphis - Imagine	64.95
Motion Man for Lightwave	104.95
Page Setter 3	55.95
Page Stream V.2.2	159.95
Pelican Press	53.95
Phasar	49.95
Pixel 3D Pro	117.95
Playmation	294.95
Pro Fills Volume 1 or 2	29.95
Pro Page 4.0	144.95
Pro Page 4 / Pro Draw 4.0 bundle	229.95
Pro Video CG II	99.95
Pro Video Fonts	Call
Pro Video Post	139.95
Pro Write 3.3	52.95
Pro Write Fonts I or II	22.95
Professional Draw 3.0	109.95
Professional Page 3.0	144.95
Proper Grammar II	48.95
Quarterback 5.0	41.95
Quarterback Tools	46.95
Real 3D Classic	84.95
Real 3D Professional	264.95
SAS/C Development System 6.0	239.95
Saxon Script Pro	72.95
Scape Maker	42.95
Scapemaker	44.95
Scenery Animator	52.95
ScreenMaker 2.2	52.95
ShowMaker	224.95
Soft Clips Vol. 1,2, 3 or 4	39.95
Soft Faces Vol 1-4 each	54.95
Song Collection for Miracle	38.95
Study Ware SAT or ACT	29.95
Super JAM!	77.95
Superbase IV 1.2	179.95
Superbase Pers II	69.95
Superbase Pro IV	167.95
Taming the Wave	81.95
Tax Break	52.95
Tiger Cub	54.95
Transporter Animation Controller Software	129.95
TruePrint/24	52.95
TV Show V.2.0	54
Type: Decorative, Designer Publisher,Videographer, each	35.95
Type Smith	114.95
Video Music Box	65.95
Video Titler V.1.5	89.95
Virtual Reality Studio	52.95
Visionary	57.95
Vista Professional	54.95
Vista Professional V.2.0	54.95
W.Shell 2.0	49.95
Your Family Tree	44.95

• RECREATION •

Abondoned Places	24.95
ATrain	39.95
A Train Cons Set	21.95
Aces of the Pacific	39.95
Adventures of Willie Beamish	34.95
Air Support	29.95
Ball Game	24.95
Bane/Cosmic Forge 1Meg	34.95
Bard's Tale Construction	29.95
Battle Toads	24.95
Birds of Prey	31.95
Black Crypt	31.95
Caesar	34.95
Campaign	34.95
Carmen San Diego/Each	30.95
Carmen San Diego - America	36.95
Castles	34.95
Campaign Disk	19.96
Castles II	34.95
Chaos- Dungeon Master 2	24.95
Civil War	37.95
Civilization	39.95
Conflict: Korea	37.95
Creepers	29.95
Crime Does Not Pay	30.95
Crusaders of the Dark Savant	39.95
Curse of Enchanta	28.95
Curse of the Azure Bonds	15.95
Cyber Empires	31.95
Cytron	29.95
Daemonsgate	34.95
Dark Queen of Krynn	31.95
Dark Seed	39.95
Death Knights of Krynn	31.95
Deluxe Music II	77.95
Demoniak	30.95
Desert Strike	31.95
Digital Dungeon	45.95
Discovery Columbus	34.95
Dragon's Lair 3	34.95
Dune	34.95
Dungeon Master & Chaos (DMII) bundle	24.95
ECO Phantoms	24.95
Ecoquest	34.95
Elf	31.95

SPRING SOFTWARE SALE!

AMW 5-93

We've Lowered Our Prices Again!

Supra Corporation

NEW PRODUCT!

SupraTurbo 28 Accelerator
for your A500 & A2000

CALL FOR PRICES!



MEMORY

SupraRAM 500RX
1MB / 2 MB / 8 MB ...... $125 / $175 / $409

SupraRAM 2000
2 MB / 4 MB .... $165 / $219
6 MB / 8 MB .... $279 / $345

SupraRAM 500
1/2 MB with Clock $39

MODEMS

SupraModem 2400 .... $65
Supra FaxModem 2400 Plus . $149
SupraFaxModem V.32 bis $319

OTHER

Power PC Board Run MS DOS
Software on your A500 .... $249

We are an Commodore AMIGA authorized dealer!

Call us for the lowest price on the Amiga 1200

SYQUEST

New Drives		
	555 44MB	$269
	5110C 88MB	$389

EPSON SCANNERS



Coupled with an ASDG ADPro Driver, Epson offers the best flatbed scanning combination available for Amiga!

EPS 600C parallel / SCSI ..... $779 / $819
EPS 800C $1,075

PCMCIA Memory

for the Amiga 1200

2MB	4MB
$145	$239

• • AMIGA DESKTOP VIDEO • •

Digital Video

DMI Digital Editmaster FREE DELIVERY 2249
DMI Vivid 24 2749
Spectronics Visiona Board, FREE DEL., call for specifications CALL

Genlock

ChromaKey + ... 329
Rocgen Plus 309
Supergen 519
Supergen 2000S FREE DELIVERY . 1199
GLock 389

Single Frame Controller

BCD 2000A 649
Personal SFC 2.0 339
Personal Time Base Correctors 749
DPS 230 .... Call
IDEN TB Card / TR-7 Remote ... 849/129
Kitchen Sync .... Call
Kitchen Sync Genlock Options 159
Personal Series Remote Control 239
S-VHS Option Kit for Kitchen Sync 89
TBC III .... Call

Other

AD Speed (all Amiga Computers) 164
Advance Gravis Amiga Game Pad 21
Air Drive Int 3.5"-A3000/500/2000 85
AMAXX II PLUS 325
Amiga RF Modulator 29
Amiga 1680 Modem 29
Big Foot Power Supply 85
Color Splitter 103
Data Flyer RAM Card OK 85
DCTV Free Delivery 289
Digiview Media Station 145
Digital Sound Studio 75
ECE Midi Interface 48
Flicker Fixer 229
Flicker Free Video II 225
MBX 1200 w/14MHZ 881 149
MBX 1200 w/25MHZ 882 219
Mega Chip 2000 w/Super Agnus 195
MIDI Gold Insider A2000 59
Mini Gen 179
Miracle Keyboard 319
Multistart II 35
Opal Vision FREE DELIVERY! 949
Personal VDA 1000 (IBM or Amiga slot, please specify) 129
Perfect Sound 65
R.G.B. Converter / DCTV 185
Roctec Internal 500 Drive 75
Rommatic 22
Toaster Oven 429
Triple Play Plus 159
Video Director 134
Zeus ACCL 28MZ A2000 559

Software

See productivity software list below.

GOLDEN IMAGE®

NEW! **DELUXE HAND SCANNER** $219
with Migraph TouchUp Software and now with Migraph OCR

HAND SCANNER NEW LOW PRICE **$129**
with Migraph TouchUp Software

Power Pen, pen shaped mouse $49
Migrapah Touch-Up Software $152
Replacement Mouse $28
Optical Mouse $45
1/2MB RAM Expansion for A500 with Color Calander $33
Master 3A-1, 3.5 Floppy External Disk Drive for the 500/1000/2000 .... $75

Elvira II - Jaws of Cerberus 24.95
Essence 39.95
Eye of the Beholder I or II 37.95
F-14/F-18 .... 29.95
F-15 Strike Eagle II 34.95
Fables & Fiends: Legend of Kyrandia 34.95
Falcon 29.95
Fantastic Voyage 27.95
Fighter Dual Pro 34.95
Fire Force 24.95
Gateway to the Savage Frontier 31.95
Gods 24.95
Great Naval Battles 42.95
Great Naval Battles Expansion Disk . 20.95
Hardball II 29.95
Harpoon 37.95
Battleset #4 .... 25.95
Harpoon Designers' Series Battleset 31.95
Harpoon Signature Edition 47.95
Harrier Assult 34.95
Heimdall 24.95
Hockey League Simulator 24.95
Indy Jones 4: Fate of Atlantis 34.95
Jack Nicklaus Unlimited 34.95
Leander 29.95
Legend of Kyrandia 34.95
Lemmings 1 or 2 .... 28.95/34.95
Light Quest 31.95
Links 29.95
Firestone 17.95
Lords of Time 29.95
Lost Treasures of Infocom 39.95
Madden Footbal 31.95
Mega Fortress 37.95
Mission Disk #1 or 2 .... 25.95
Mercenaries 37.95
Megatraveller 2 .... 34.95
Might & Magic III 34.95
Nigel Mansells 36.95
No Greater Glory 19.95
Obitus 34.95
Oh No! More Lemmings stand alone 29.95
Oh No! More Lemm. add-on 21.95
Out of this World 46.95
PGA Tour Golf 31.95
Golf Tournament Course disk 17.95
Paladin II 34.95
Paper Boy 2 .... 25.95
Perfect General 34.95
WWII Scenario Disk 19.95
Pinball Dreams 24.95
Pinball Fantasy 24.95
Piracy 24.95
Police Quest 1 Enhanced 34.95
Police Quest 2 or 3 .... 34.95
Pools of Darkness 37.95
Pools of Radience 15.95
Populous 31.95
Populous II 37.95
The Challenge scenario disk 20.95
Powermonger 31.95
Data Disk 20.95
Prince of Persia 24.95
Prophecy of the Shadow 37.95
Ultima VII Part 2 .... 37.95
Railroad Tycoon 34.95
Realms 19.95
Red Baron 34.95
Road Rash 31.95
Robosport 34.95
Secret of Monkey Island I or II 34.95
Shadowlands 29.95
Shadow of the Beast III 34.95
Sharif on Bridge 29.95
Shuttle 29.95
Silent Service II 19.95
Sim Ant 34.95
Sim City 29.95
Sim Earth 29.95
Solitaires Journey 34.95
Sorcerian 36.95
Space Hulk 31.95
Speedball II 34.95
Star Control II 34.95
Star Trek 25th Anniversary 34.95
Strip Poker 3 .... 29.95
Data Disk 1-5 each 17.95
Super DJ II 29.95
Tales of Magic: Prophecy Shadow ... 37.95
Team Yankee 34.95
Thunderhawk 29.95
Thunderstrike 29.95
Tom Landry Football 29.95
Tracon II 39.95
Treasure of the Savage Frontier 31.95
Ultima IV or V 37.95
Utopia 29.95
Wayne Gretzky II 34.95
Where in the ...Carmen each 29.95
Wizardry - Dark Savant 34.95
Wizardry - Bane 34.95
World Circuit 34.95
Zool 36.95

If you don't find what you're looking for - CALL US!

Since 1982
ComputAbility
Consumer Electronics

P.O. Box 17882, Milw, WI 53217

TECH INFO: (414) 357-8181
FAX: (414) 357-7814
HRS (CST): M-F 8am-8pm, Sat 11am-5pm

800-554-9980

- One of Wisconsin's Top 10 Women Owned Businesses.
- Corporate, Government & School POs Welcome.
- VISA MasterCard No Surcharge on Credit Cards.
- Most Orders Shipped within 48 Hours.
- Software Shipping only $5 per order, not per title. Hardware: 5% - Min. $5.
- C.O.D orders welcome, with only a $5.00 Charge.
- We Ship Latest Version of Software Available.
- All Products Sold Carry Manufacturers' Full Warranties & Documentation.
- APO, FPO HI, AK Puerto Rico & Canadian orders welcome: 6% - Min. $6. International Orders Shipped First Class Mail Insured: 15%- Min. $15. If mail cost exceeds calculated amount, you'll be billed additional.
- Call for Free Catalog & Items Not Listed

Prices fluctuate beyond our control & may change for better or worse. Defective returns must have a Return Authorization number. Call our 1-800# to obtain a Return Authorization or your return will not be accepted. Shipping & handling are non-refundable. All sales are final. All returns are subject to a restocking fee.

The Game Preserve

Epic
Wing Commander

By Peter Olafson

BREAK OUT THE champagne: We've been waiting for these two flyboys to buzz the Amiga for some time now. The space-combat games Wing Commander (an import from the UK's Mindscape International, $39.95) and Epic (Ocean, $49.95), each in development in Europe for around two years, have finally turned up in US air space.

Both games are solid and engrossing, each in its own very different way. But I have to 'fess up: Anyone who plays Wing Commander on a speedy machine first isn't likely to be bowled over by Epic afterward. Wing Commander will, quite simply, blow you away.



It's you against the Kilrathi in Wing Commander.

Wing Commander

WC is a superb translation of Chris "Times of Lore" Robert's Origin game for the IBM. You're a fighter pilot newly assigned to the Tiger's Claw—a spaceward version of an aircraft carrier that's about to take on an aggressive race of sentient felines called the Kilrathi. You'll fly a range of fighters, each with its own gifts of destruction, cockpit layout, and lovely array of options (two types of missiles and guns, afterburners, ejector seat—the works). You can issue an array of taunts to the enemy ("Die, furball!") and commands to your wingmen ("Break and attack")—actually, there are a number of wingwomen as well—who'll respond on a green-screen monitor. Once you've fried the last of the "kitties" or cleared a belt of obstacles, you can kick in the autopilot to jump to your next encounter with a neat side-view cut scene.

Obstacles? You'll play intergalactic dodgeball and 3-D asteroids with the Kilrathi proximity mines and asteroid fields. And watch out for swarms of enemy craft, ranging from pesky gnat-sized fighters to giant ships of the line. The ships aren't the polygon constructs used in games like Elite, Starglider, Federation, or Xiphos, either. They look like real ships—multicolored and odd-shaped—and once they've taken a couple of hits against weak shields, they'll begin to disintegrate like real ships. A capital ship looks like a great slab of metal hanging in space, and nothing blows up as gorgeously as a Kilrathi destroyer. The ex-

Continued on p.72

CRIB NOTES By Peter Olafson

We left off last time about two-thirds of the way through Lure of the Temptress (*Konami*, $49.95) with Mallin offering Diermot a job. Take it—a job's a job, after all—and he'll turn over the book he wants you to take to Morkus. That name should ring a bell. (Didn't the Skorl tell you something nasty about him when you chatted them up as Selena?)

So this time, don't do as you're told. Instead, take the book to the monks—Toby in particular. (Bet you were wondering when we'd get to them.) They'll reward you and bring you up to date on a particular dragon—namely, on the recipe to bring him under your control. Off to Goewin's herb shop, then, to put it together.

Oops. Seems Goewin doesn't have any cowbane. Ain't it always this way with recipes in adventure games? You can find it two ways. The honest way is to have a talk with Luthern's voluble old mother or to send Ratpouch (who's still hanging around) to do it for you. The dishonest way is to make a beeline for the flower bed in front of the forge. Either way, take the herb back to Goewin, and she'll make you a nice herbal milkshake.

You don't know where the dragon is, but someone else does. The subject's come up before in conversation with Grubb (the fellow lounging around in front of the Magpie). He'll send you off to the Weregate—which is closed. Great. Thanks for the sour persimmons, cousin.

However, Ultar at the Severed Arms is now prepared to mutter something more useful than his usual nonsense. He'll name the gargoyles who flank the gate, and Fengael and Hammawen will tell you that they're supposed to let only women through. (Ultar himself evidently went in drag—lots of cross-dressing in this game!) You know a woman—Goewin—and while this doesn't sound like one of her favorite things, she'll go for it. You rescued her, after all. Open sez me!

Hey, new areas! And new puzzles. In the first cave beyond the gate, you'll find two skulls. The right-hand one opens the way to the green cave. Look at both skulls before you move ahead, so Goewin will know what you're talking about when you give her this next set of orders. Instruct her to return to the first cave, pull the left and then the right skulls, and return.

On into the blue cave. Pulling the left skull brings Goewin through, and once again, you bossy little misogynist, you'll want to send her back to the green cave to do the the left-right number with the skulls again to open

Continued on p.72

To locate vendors of the games reviewed, see the "Manufacturers'/Distributors' Addresses" list on p. 92.

MANTA WILL NOT BE UNDERSOLD! CALL OUR PRICE DIRECT HOTLINE TO PUT YOU IN DIRECT CONTACT WITH A SALES MANAGER AUTHORIZED TO BEAT ANY PRICE. * 908-542-1491

MANTA
COMPUTERS & SOFTWARE

Order Toll Free - 1-800-477-7706

For Customer Service Please Call (908) 542-8767
Call for current price quotes & latest releases!
Many more items in stock at the lowest prices!

Commodore AMIGA — AMIGA 1200

Become a part of the next generation of Amiga technology! The A1200 features: 14 MHZ 68020 processor, 2MB Chip RAM, AGA Chipset capable of displaying 256,000 colors simultaneously! Available options include: 40, 80 & 120 MB internal hard disks, math coprocessors, and ram expansions.

AGA GAMES IN STOCK
AMIGA 1200 IS IN STOCK!
Call for the best prices on the A2000, 3000, 600, 1200, 4000!

GVP — GREAT VALLEY PRODUCTS — LOWEST PRICES

Hard Drives
A2000 HC8 ....$159
A2000 HC8+/120 ....$389
A1200 SCSI....................$299
A500 HD8+/40 ....$355
A500 HD8+/80 ....$399
A500 HD8+/120 ....$459
A530 Turbo+/80............$659
A530 Turbo+/120..........$709
A530 Turbo+/1089........$819

Miscellaneous
Digital Sound Studio..........$69
Impact Vision 2.0..........$1249
G-Lock.......................In Stock
PC-286..........................$99
Phone Pak VFX...............$299

Accelerators
G Force Combo 25/1 ......$509
G Force Combo 40/4 ......$699
G Force Combo 50/4 ....$1149
G Force 2000 040/33.......$1389
A1230/40 ....$599

WE CARRY ALL GVP PRODUCTS

DKB

MegAChip 2000/500 • $149.95
Two megabytes of Chip Ram. Doubles your graphic memory for desktop video, publishing, 3D rendering and multimedia. Compatible with Video Toaster!
Call for 2MB Agnus Price

MultiStart II • $39.95
Install 2.0 and 1.3 ROMS in your Amiga 500 or 2000. Switch between 2.0 and 1.3 ROMS with the keyboard.
Call for 2.0 operating system

Insider II A1000 • øK $149.95
Battery backed clock and calender with up to 1.5 mg RAM.
Call for RAM prices

Kwikstart II • $69
Puts Kickstart 2.0 and 1.3 in your Amiga 1000 Boots faster and auto boots most hard drives.

2632/4MB 32 Bit Expansion • $399.99
112 Megabyte memory expansion for the Amiga 2500/030 and CBM A2630 accelerator.

ALFA DATA®

Special!
Alpha Scan + ...$159
with OCR $199

Ext. 3.5' Floppy......69.95
A501 RAM exp 32.95
RA5 A500 4 MB RAM
øK 79.95
4 MB...................229.95
PCMCIA RAM - Alpha 1200
2MB.......................129.00
4MB.......................219.00

Mice
Mega Mouse...........22.00
Mega Mouse+.........36.00
Optical...................49.00
Cordless Mouse 69.00
Crystal Trackball.....59.00
Optical Pen Mouse......59.00

Call for the Complete Line of Quality Alpha Data Products!

SPECIALS
286 At Bridgeboard $249.99
AmiBack Tools $42.95
Caligari 24 ....$229.00
Commodore Flicker Fixer ...$149.99
DCTV $279.00
Golden Gate 386,486 ....Call
Morph Plus...........................$139.00
Opus 4.0...............................$53.00
XT Bridgeboard $99.99

Productivity/Utilities
AmiBack 2.0..........47.95
AmiBack Tools.......42.00
AmiBack Tools+ .....Call
Arexx Cookbook....34.95
Can Do 2.0 ....115.00
Cross DOS 5..........34.95
Directory Opus 4.0..53.00
Diskmaster II 37.00
Final Copy II 89.00
Hotlinks.................85.00
Image Master.......119.95
Quarterback 5.0 ....39.95
Quarterback Tools .44.95
Pagestream 2.2....159.95
Pelican Press 54.95
Pro Page 4.0 ....159.95
Pro Write 3.3 ....54.95
Proper Grammar II .59.95
SAS/C v.6.0.........234.95
SuperBase IV 159.95
SuperBase Personal IV ....Call
True Print 54.95
Type Smith 114.95

Audio & MIDI
AD 1012...............Low
Asound Elite 64.95
Audiomaster IV......59.95
Audition 4 ....54.95
Bags & Pipes Pro .184.95
ECE MIDI 47.95
One Stop Music Shop ..599.00
Patch Meister.........64.95
Soundmaster.......124.95
Super Jam............79.95
Sync Pro 174.95
Triple Play MIDI....159.95

Graphics & Video
Aladdin 4D 239.95
Art Dept 2.1.........149.95
Art Expressions.........Call
Brilliance ....Call
Broadcast Titler II ..214.95
Caligari 24...........229.00
Color Splitter 104.95
Cinemorph 99.95
Deluxe Paint IV 99.95
Deluxe Paint AGA...Call
Disney Animator 47.95
Imagine 2.0.........209.95
Media Station 159.95
Morph Plus 139.00
Pixel 3D Pro.........119.00
Playmation 269.95
Pro Conversion Pak...52.95
Profills Vol. 2 ....29.95
Scenery Animator....54.95
Virtual Reality Studio .54.95
Vista Pro 2.0..........57.95

Miscellaneous
A2000P Bundle......29.95
Amax II+.............349.00
Amtrack Trackball..59.00
Atalk III 39.95
Distant Suns 4.1 ....54.95
Keyboard Skin 16.95
Monitor Master.......Call
Voyager................69.95

Hardware

Supra Corp
Supra Ram 500 RX
1 MB 119.00
2 MB 179.00
Accelerator
Turbo 28 ....Call
Modems
2400 BD External/Cable..75.00
2400 PLUS/Cable 119.00
Fax Modem V32 bis ..Call

Monitors
Commodore 1084S ...Call
Commodore 1960 .....Call
Leading Edge ....Call
NEC 3FGX.................Call

Memory/Chips
A4000 RAM................Call
1x8 Simms ....Call
256x4 Dram ....Call
DOS 2.0 ....Call
Super Denise ....Call
1 x 1 80ns.................Call
GVP Simm 32 ....Call
3000 1x4 ZIPS ....Call
1x4 Page ZIPS...........Call

Hard Drives
NEW Syquest 88 5110C
Reads & Writes
44MB Carts.....$399.95
Maxtor
7120 120MB $259.99
7213 213MB $409.99
340SY 340MB....$599.99
535 MB.................Call
IDE Drives.............Call
Quantum Drives.....Call
Panther 1.0GB ....Call

Genlocks
G Lock......................Call
Supergen...............549.00
Supergen 2000S ...1199.00

Misc Hardware
Big Foot Pwr 89.00
Bread Board..........Call
Commodore A570 .Call
DCTV..................279.00
DCTV RGB Converter ..Call

Misc Hardware Con't
Desk Jet 500C ....Call
DMI Vivid 24 ....Call
DMI Digital Edit Master ...Call
DOS 2.1 ....Call
Epson 600C Scanner..Lowest
Epson 800C Scanner..Lowest
Firecracker 24/2 MG..Call
Golden Gate
386SX 25MHZ ....Call
Kitchen Sync 1275.00
Personal SFC 349.00
Progressive 040/2000..Call
Progressive 040/500...Call
Quantum 127, 240, 340 .Call
Smartport........In Stock
Supra Turbo 28......Call
VXL 30/25MHZ 299.95
VXL 30/40 MHZ ...459.99
VXL Math Co ....Call
VXL RAM Board .....Call
Y/C Plus.................Call
Zeus 040/2000/SCSI .Call

VIDEO TOASTER
AmiLink CI/AB Roll ....Call
Kitchen Sync......................$1275
SVHS option.........................$95
Genlock option $129
TBC III $749
TBC Remote ....Call
Toaster 2.0 Upgrade.............$279
Toaster Cozzy.........................Call
Toaster Vision $115
V-Scope...................................Call
Video Toaster 2.0 ....LOWEST

ECONOMY TOASTER CONFIGURATION:



Amiga 2000
GVP HC8+/120
7MB RAM
Video Toaster 2.0
1084s Monitor

Everything you need for a basic toaster workstation $3499.00

CALL OUR VIDEO CONSULTANTS FOR OTHER CONFIGURATIONS.

NEW - ONLY 99.95

VBS
VIDEO BACKUP SYSTEM

Why buy a tape drive when you already own one?

All new! Finally, an inexpensive way to back-up your data! This easy to use package includes the hardware interface necessary to connect your Amiga* to **ANY** VCR, as well as the intuitive, point and click software for backing up, restoring, or verifying. File logging, multiple backups per tape, selected file restore, and storage averaging 3¢ per megabyte are all features of this incredible product!

VBS WORKS WITH ALL AMIGAS - EVEN THE AGA MODELS!

* Amiga 3000 and 4000 require video adapters (not included) Amiga 1000 requires a serial adapter (not included).

In NJ Call:
(908) 542-1251
FAX: (908) 542-3654

ORDER TOLL FREE 1-800-477-7706

115 Route 35
Eatontown, NJ 07724

Retail location open Monday - Saturday • Walk in Traffic Welcome • Phone orders taken 7 days a week

CUSTOMER SERVICE & TECH SUPPORT CALL • 1-908-542-8767

• Terms VISA/MASTERCARD, Discover, certified checks and money orders welcome. School & Corporate Purchase accepted. Most items shipped 1-2 Business days. • Returns: all items returned must have RMA # before returning. Defective products exchanged for same item only. Hardware items will be replaced or repaired. All returned items subject to a restocking fee. Shipping non-refundable. Call for complete details. • Ad prices subject to change without notice. Prices may differ in retail location - Software Concepts, Eatontown. Not responsible for typographical errors. Customer Service and product information call (908) 542-8767.

* 'Beat any price' guaranty may not apply to certain items.

AUTHORIZED *AMIGA* SALES & SERVICE CENTER

Circle 34 on Reader Service card.

Orders Only USA & Canada

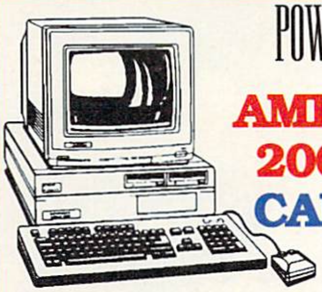
1-800-258-0533

PHONE SALES HOURS: M-F 9 a.m. - 9 p.m. • Sat. 10 a.m. - 8 p.m. • Sun. 12 noon - 5 p.m.

AMIGAMAN

GET YOUR ORDER FAST FOR AS LITTLE AS $2 ADDITIONAL SHIPPING (ORDERS UNDER 10 LB.)

FEDERAL EXPRESS

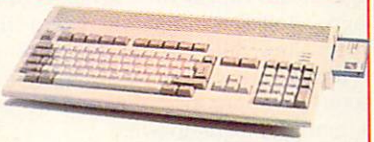


POWER UP TO THE AMIGA 1200

AMIGA 2000 CALL

ASLO AVAILABLE

- A1200 w/40MB HD
- A1200 w/85MB HD
- A1200 w/120MB HD



In Stock - Call for price!

FREE Final Copy 1.3 • Deluxe Paint 4.5

STILL THE PREFERRED PLATFORM FOR THE VIDEO TOASTER

COMPLETE WORK STATIONS AVAILABLE

2.5" HD DRIVES FOR AMIGA 1200 & 600
COMPLETE PACKAGE

• 40 MB	$199
• 80 MB	$275
• 120 MB	$405

Includes Drive, Cable & Software

Commodore® AMIGA®



cinemorph $89

- Still or Full Motion morphing
- 24-Bit color and 8-Bit grayscale modes available
- Multi-speed morphing
- Spline and line morphing



$249

Image FX is a total image processing Package for RGB, CMYK, or HVS and full motion morphs and more.

DSS 8 DIGITAL SOUND STUDIO — 8 BIT DIGITAL SOUND $69

A premium stereo sound sampler, fast easy editor, & self-contained 4-track sequencer... all in one.

G-LOCK $399

2.1 w/ROM $85 For Amiga 500/2000 Includes Books & Work-bench Disk | **2.1 UPGRADE for 2.0 $44**

EXPANSION SYSTEMS DataFlyer 500

Hard drive controller

Budget Solution for your Amiga 500

SCSI Controller Only

$119



DataFlyer RAM OK-$84

DataFlyer Express



Hard Drive Controller Expandable to 8 Megabytes of RAM for the Amiga 500

SCSI $169

SCSI/IDE $229

GVP A530 Turbo

ALL-IN-ONE EXPANSION FOR A500

40MHz Accelerator, Hard Drive & RAM Expansion

w/80MB HD $719

w/120MB HD $759



A500 HARD DRIVES
EXPAND UP TO 8MB RAM

W/40 MB hard drive	$349
W/80 MB hard drive	$419
W/120 MB hard drive	$479
GVP/PC286 IBM Card	$149

G-Force 30
68030 All In One Board with SCSI interface

25MHz/25/1MB	$529
40MHz/40/4MB	$699
50MHz/50/4MB	$1199

Expandable to 16MB of 32-Bit RAM
4MB 32 Bit Extra RAM $199

G-Force 40
68040 for your A2000
33MHz/33/4MB $1449
Includes SCSI Controller

New! **A1230 Turbo+**
68030 40 MHz w/Optional FPU and 32 Bit Ram

A1230 40/0/0MB	$399
A1230 40/40/4MB	$669
Additional 4MB RAM	$199

New Special Low Price!

IV24 version 2.0

- DESKTOP DARKROOM capture images or bring stills in from other applications for professional processing, retouching, using filters, special effects and color separation.
- MyLAD Hot-switch between 2 video sources with 50 packaged video transitions for live action production studio effects.
- Macropaint-IV24™ 2.0 New enhanced-Paint 24 bit graphics from 16.8 million colors. Key video/grahpics - Access ARexx scripts directly.
- Caligrari24™ 3-D modeling /animation/rendering package... Desttop animations future.

$1249

PHONEPAK

PhonePak™ VFX

Receive faxes & store, view,print
Record & playback
Receive VFX™ messages combining voice & fax, from vertually any standard phone/fax machine
Send faxes to 1 or more n0.
Create customized databases for names, address, & phone

$299

(100's of Titles Available) GAMES (Call for More Titles)

A320 Airbus	$47	Fighter Duel: Corsair Vs. Zero	$17	Red Zone	$31
A-Train	$44	Fighter Duel Pro	$37	Road Rash	$37
Agony	$31	Fighter Duel Flight Recorder	$49	Robo Cop 3D	$35
Air Support	$31	Fighter Duel Pro Parallel Adap	$15	Rules of Engagement	$39
Amos 1.2 The Game Creator	$62	Four Crystals of Trazere	$37	Secret of Monkey Island 2	$38
Amos 1.3 The Compiler	$44	Gateway to the Savage Frontier	$15	Shadow Land	$31
Amos 3D	$44	Gods	$25	Shadow of the Beast 3	$33
Amos Professional	$87	Hard Nova	$34	Shadow Sorcerer	$15
Armour Gedden	$28	Heimdall	$31	Silent Service II	$37
Awesome	$37	Hoi	$25	Sim Ant	$37
Back To The Future III	$25	Immortal	$34	Sim City	$31
Bards Tale Construction Set	$34	Jaguar X2200	$31	Sim City Graphics #1& #2	$13
Battle Chess	$31	John Madden Football	$37	Sim City Terrain	$12
Bill's Tomato Game	$31	Leander	$31	Sim Earth	$47
Birds of Prey	$37	Legend Of Kyrandia	$38	Simpsons	$39
Black Crypt	$37	Lemmings	$31	Speedball 2	$25
Carmen, Where in Time	$31	Lemmings, Oh No! More	$22	Spirit of Excalibur	$31
Carmen, Where In The USA	$31	Lemmings II	$37	Strip Poker 3	$31
Carmen, Where In The World	$31	Links	$38	Strip Poker 3 Data #1-2-3-4-5-6	$16
Centerfold Squares	$19	Links - Bountiful Country Club	$16	Team Yankee	$37
Champions Of Krynn	$15	Links - Firestone Country Club	$16	Tengen Arcade Hits	$25
Civilization	$47	Lost Treasures of Infocom	$44	Terminator 2	$43
Clue Master Detective	$25	M1 Tank Platoon	$37	Thunderhawk	$31
Conflict in Korea	$15	Megafortress	$44	Treasure of the Savage Frontier	$36
Conflict in the Middle East	$15	Megafortress Mission Disk #2	$31	Trump Castle 2	$31
Curse Of Azure Bonds	$15	Megatraveller 2	$37	Ultima VI	$44
Death Knights of Krynn	$15	Might & Magic 3	$41	Virtual Reality Studio 2	CALL
Discovery, Steps of Columbus	$37	Mig29 Super Fulcrum	$31	Warlords	$31
Double Dragon II	$25	Obitus	$37	Wayne Gretzky 2:	$34
Dragon Strike	$15	Ork	$31	Wing Commander	$34
Dragon's Lair	$37	Out of this World	$37	World Circuit Grand Prix	$37
Dragon's Lair II: Time Warp	$37	Pacific Islands	$31	Yeagers Aft. 2.0	$28
Dungeon Master 1&2 Bundle	$31	Perfect General	$37		
Elvira	$22	Perf. Gen. Data Disk WW II	$22		
Elvira 2 Jaws of Cerberus	$25	Pinball Fantasies	$31		
Empire	$34	Pinball Dreams	$25		
Epic	$44	Pools of Radiance	$13		
Eye of the Beholder	$15	Pools of Darkness	$41		
Eye of the Beholder II	$43	Populous	$34		
F14/F18	$31	Populous 2	$41		
F15 Strike Eagle II	$37	Populous 2 Challenge	$23		
F19 Stealth Fighter	$37	Powermonger	$34		
Falcon	$31	Powermonger WWI Data Disk	$22		
Falcon Mission 1: Counter Strike	$16	Pro Football Simulator 3.0	$28		
Falcon Mission 2: Firefight	$19	Railroad Tycoon	$37		

EDUCATION

Adventures in Math	$25
Aesop's Fables	$24
Algebra II	$31
All About America	$24
Amy's Fun-2-3- Adventure	$31
Barney Bear Camping	$22
Barney Bear at the Farm	$22
Barney Bear in School	$22
Barney Bear in Space	$22
Calculus	$31
Carmen San Diego Time	$31
Carmen San Diego USA	$31
Carmen San Diego World	$31
Crossword Const. Kit	$25
Decimal Dungeon	$24
Discovery Math/Spelling	$25
Distant Suns 4.0	$55
Fraction Action	$24
Katie's Farm	$25
Logic Master	$24
Marks Math Lab	$31
Math Talk	$25
Math Wizard	$24
McGee Fun Fair	$25
Read and Rhyme	$24
Talking Animator	$41
Talking Coloring Book	$19
Trigonometry	$31
Vocab. Quest in Land of Unicorn	$24
Wonders of the Animal Kingdom	$24
Word Master	$24
World Atlas	$37

HARDWARE

Midi's

ECE Midi	$49
Midi Gold 500	$56
Midi Gold Insider	$65
Phantom SMPTE Midi	$229
Midi Cable 6 ft.	$8

Audio

Audiomaster 4	$62
Digital Sound Studio	$79
Perfect Sound 3.1	$69
Sound Master	$139
Studio 16/AD 516	$1299
Studio 16/AD 1012	$539

Replacement Parts

Big Foot 200W powersupply	$89
A500 Internal Drive	$71
A2000 Internal Drive	$71
A3000 Internal Drive	$71
HD 1.76 Drive 3000	$91
HD 1.76 Drive 4000/2000	$91

Video Display Boards

Flicker Free 2	$239
Flicker Fixer	$249

Joysticks, Mouses & Trackballs

Slik Stik Joystick	$7
Boss Joystick	$15
Tac 50 Joystick	$17
Bat Handle Joystick	$25
Jin Mouse	$25
Opto-Mechanical Mega Mouse	$35
Optical Mouse	$55
Boing Optical Mouse	$94
Amtrac Trackball	$69
Kraft Trackball	$59
Mouse Switch (Automatic)	$29

Supra Modems

2400 External	$74
Fax Modem 14400	$299
Fax Modem 9600	$249
Fax/Modem Softw ($60 w/Modem)	$79

PC/Mac Emulators

Amax 2 Plus	$379
Golden Gate 386sx Board	$599
Golden Gate 486sic Board	$1099
Amiga 3386 Board	$479

External SCSI HardDrive Cases

Single Bay open or closed front	$99
Upright Case for single 3.5HD	$109
Dual Bay for 2 half height HD's	$149
Four Bay open front (not shown)	$259



All Units Include:
- Power Supply
- SCSI External Cable
- Power Cable
- SCSI Pass thru and Mounting Hardware
- LED



12 NEW TRIBES

LEMMINGS 2 THE TRIBE $37



AGA

ZOOL $34

CHECK US OUT FOR THE BEST $29 EURO GAMES



TOP STAR JOYSTICK

QUICKJOY FOOT PETAL $26





FREEWHEEL STEERING WHEEL $35

B-17	CALL
Body Blows	$34
Chaos Engine	$34
Dark Seed	$47
Dark Seed AGA	$47
Harrier Assault	$44
History Line 1914-1918	$44
Humans	$38
Lion Heart	$34
Nigel Mansel	$38
Mannigel Mansel AGA	$38
Pool (Archer McClean)	$34
Push Over	$35
Sensible Soccer	$39
Sleepwalker	$44
Sleepwalker AGA	$44
Wing Commander	$34
Zool	$34
Zool AGA	$34

SHIPPING - NORMALLY WITHIN 2 BUSINESS DAYS

UPS GROUND (Continental US)

$0 TO $99	7% MIN $5
$100 TO $199	5% MIN $7
$200 TO $499	4% MIN $10
$500 TO $799	3% MIN $20
$800	2.5% MIN $24

* GET YOUR ORDER FAST FOR AS LITTLE AS $2 ADDITIONAL SHIPPING (ORDERS UNDER 10 LB.)

Fed Ex. 2nd Day add $2 to Ground
Fed Ex. Next Day add $6 to Ground
APO, FPO add $11 to Ground (by Mail)
CANADA add $11 to Ground (by Mail)
PR, HI, AK add $10 to 2nd or Next Day
COD orders OK. Add $5 Prices subject to change without notice. Returns accepted for 10 days after date of purchase

Call cutomer Ser.for RA# before returning. Defectives replaced with same item. 15% Restocking fee for items returned and not exchanged for same. Customer responsible for return shipping.

International Orders (not APO, FPO.) Send copy or FAX of front & back of Charge Card w/signature. Call or FAX for shipping quote.

FAX# 1 412-962-0279

MAILING ADDRESS:
Computer Basics, Inc.
1490 N. Hermitage Rd.
Hermitage, PA 16148

Circle 12 on Reader Service card.

From p.68
plosions in this game are almost physical sensations.

The missions start at a modest difficulty but quickly reach a level at which you're unlikely to complete them in one go. Unlike in Epic, however, here you're not simply booted back to the beginning to try again. (You can repeat the encounter if you thought to save your progress.) Wing Commander uses a "tree" structure that plots the story along different tracks according to your success against the Kilrathi. (If you fail too often, human forces fall back.) You should play once just to play—and damn the consequences—and then play again to win.

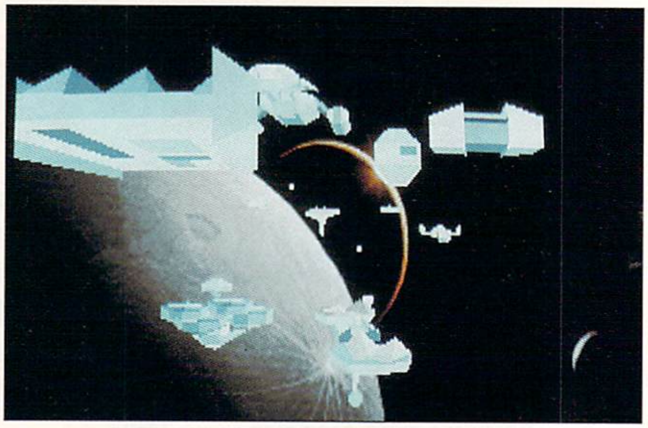
Some folks will grouse that it displays only 32 colors compared to the IBM's 256, but we're not getting short shrift. They're the right 32 colors. The difference is noticeable only in the bar and preflight scenes and the effect hardly unpleasing at that.

The music, by contrast, has a real John-Williams-style flair and easily surpasses the synthetic version that accompanied the IBM original. I also found the joystick control significantly tighter and the craft generally more responsive.

On the intermission screens, however, the cursor's speed is appalling and the fire button has to be double-clicked for an option to take effect. (They've taken out mouse support, but failed to kick the pointer into the background, so it sits in the playfield, immobile and semi-visible.) The major issue here, however, is speed. Bitmaps move more slowly than polygons. Wing Commander runs brilliantly on a machine equipped with a 68030 or '040, and an '020 is more than adequate. On an unaccelerated A500, however, it's decidedly slow; gamers using this machine may want to consider Epic instead.

Epic

The Epic fighter flies incredibly smoothly on a basic Amiga; it has the same greased-wheels sensation as Ocean's earlier F-29 Retaliator (which is from the same programming team). It's a sort of super Starglider. They've kept the palette basic and the polygons warm and running, and on missions with land targets and a fixed surface to reckon the speed against, the game achieves the sort of reckless velocity more commonly associated with Euro-demos. And that's not the least of it. Epic has a glorious intro and cut scenes, music straight out of Robocop 3D, and shattering explosions that will make you blink. (Hey, explosions make a difference; they're a sort of interim reward.)



You're in charge of the refugee armada in Epic.

But, Epic just isn't in the same league as WC. In space, it flies like an arcade game, with very little vertical range. You'd have better luck doing loop-the-loops in a tethered plane at an amusement park. It's also small—just nine missions compared to WC's 40 or so. While they'll probably take you longer to complete successfully than the average WC mission (they've been customized in loving detail), they're always the same, giving you little incentive to replay the game.

It also doesn't go on hard disk. (Unlike the initial European version, the US version does recognize fast processors.) And I wish the story was more original. This saga of a refugee armada's trek across dangerous space appears to have been borrowed from *Battlestar Galactica*. Can anything inspired by Lorne Greene and Dirk Benedict be good?

Actually, yes. And Epic is—just not as good as Wing Commander.

Continued on p. 76.

CRIB NOTES

From p.68
the door into the last cave.

No skulls here, but there is one mean critter in waiting. Save your game (this may take a couple of tries), grab that axe and have at his midsection. He's about a head taller than you, but he's slow. Use it to your advantage and be aggressive. (I've also seen reports that the overhead chop method is effective.)

Once the baddie is history, head into the dragon's lair. Don't muck about here or your goose will be cooked, dragon-style. Use your potion immediately, and Diermot's wish is the big lizard's command. He'll tell that Selena has been possessed by a demon and then surrender the magical Eye of Gethryn, which is going to prove very useful one of these screens. But now it's sleepy-time for this boy, so take your leave, using the left skull on your way out.

You may feel a bit at loose ends wandering around Turnvale at this point. I suggest just talking to your allies. It seems Luthern's plot isn't the only one afoot; the Skorl have a score to settle with Selena as well. Mallin can put you on to it. Wait outside the shop in the marketplace until one of these goblin relatives comes calling. After he enters, peer in the window—I love this feature. You'll overhear him moaning to proprietor Ewan about the lack of food and urging him into a barrel bound for the castle. Once the Skorl's gone, offer to take Ewan's place. *Voilà*: You're in the castle basement and into the endgame.

Note the wine barrel in the left corner. You can't actually do much here at the moment, so visit the kitchen. Here you'll find some fat (in the carcass), some tongs (close by), and a malleable young 'un named Minnow. Back in the cellar, use the tongs to pull the bung from the barrel, and now have Minnow tell his boss that there's someone in the cellar. This has the benefit of being true. The Skorl are all drunken louts at heart, however, and this one will slurp up the wine and fall asleep. (Naturally, you'll want to be as inconspicuous as possible while this is going on. The cellar's right corner should do nicely.)

Don't throw Minnow back just yet. Now you just have to find Selena, and you'll need his help again. Across the dining room, you'll find a gatehouse with some rusty machinery. The fat should prove a good lubricant for that lever; have Minnow pull it as you turn the winch. This lowers the drawbridge and opens the path to Selena.

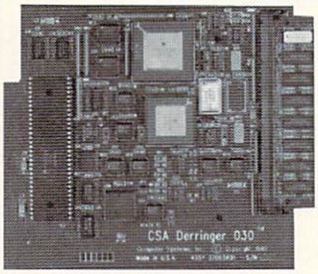
Oh, dear. There's one more thing. There's this other critter on the bridge, so save your game and have at it again, using the same basic moves as in the caves. Then press on to the left and let nature (and the end animation) take its course. It's a rather neat bit. I guess the title had a point after all, eh?

That's it for this issue. Next time, as promised, we'll visit one of the shadow lands. I just haven't decided which: Shadowlands itself or Shadow of the Beast III. □

Looking for More Power From Your A500, A1000 or A2000?

The CSA Derringer Accelerator is the Answer

Give your Amiga 500, 1000* or 2000 the power of an A3000 for under $500.00.



*Call for more information

New Low Price!!!

- Holds up to 32 megabyte of 32 Bit Ram.
- 68030-25 mhz cpu *with* MMU (not EC)
- 68881 clocked at 25 mhz
- 1 meg of 32 bit RAM (remaps Kickstart)

Only $399[00]

With: 4 meg of 32 bit RAM – $499.00
8 meg of 32 bit RAM – $699.00
16 meg of 32 bit RAM– $1099.00
68882-25 FPU add $75.00
68882-50 FPU add $135.95

Order Now and Receive a FREE 68881

Call our Accelerator Hotline Today! – 1-800-CSA-XLR8

New Derringer Platinum 50mhz Only $699[00]

Includes:
- *50mhz CPU (with MMU)*
- *4 meg of 32 bit 60ns RAM*
- *Optional 50mhz FPU $135.95*

Same features as the CSA Derringer but faster!

LASER PRINTER MEMORY

HP II, IID, IIP, IIID, IIIP and all other Plus Series

Board with 2 MB	$79.00
Board with 4 MB	$145.00
Deskjet 256K Upgrade	$59.95
HP 4 (4 Meg)	$149.00
HP 4 (8 Meg)	$295.00
Similar savings on Panasonic, Star, OKI, TI, Nec, Epson and others. Call for Pricing	
Panasonic/Citizen 32K Buffer	$14.95

COMMODORE CHIPS

All Bridgeboard Chips	Please Call
Super Denise	$33.95
1.3 ROM	$26.95
CIA 8520 $10.95 or two for	$19.95
A1000 1.5 MG Upgrade-Memory and Clock/DKB	*$189.95*
MC68000/68010	$15.00
Multistart II – Rom Switcher Rev 6a	$39.95
CSA Rocket Launcher – 2630 Doubler	$499.00
DKB 2632 with 4mb	$399.00

MICROBOTICS 1200Z

With Clock and 68881RC20 FPU

1 MB	$159.00
2 MB	$199.00
4 MB	$299.00

Call for other configurations!

DRAM BLOWOUT

We'll Beat any Advertised Price! Nobody's Cheaper

SIMMS

IVS 1 MEG Simms	$29.95
1x8–80	$33.00
1x8–70	$35.00
4x8–80	$119.00
4x8–70	$125.00
4x8–60	$149.00
A4000 70 NS 4MB Simms	$149.00
A4000 80 NS 4MB Simms	$139.00
A4000 60 NS 4MB Simms	Call

GVP SIM32

4 MB	$169.95
1 MB	$69.95

GVP NIBBLE MODE SIMMS

4 MB	$250.00
GVP 40ns Simms	$189 ea.

ZIPS

A3000 Static Column Zips	
1x4-80 SCZ	**$17.50**
1x4–70 SCZ	$17.95
1x4–60 SCZ	Call
256x4 - 80 SCZ	$6.99

Includes Instructions

PAGE ZIPS

1x4-100	$13.95
1x4–80	$15.95
256x4–80	$4.50
256x4–100	$4.00

DIPS

1x1 – 100	$3.49
1x1 – 80	$3.99
1x1 – 70	$4.50
256x4–80	Call
256x4–70	Call
1x4–80	$17.95
1x4–60	$19.95
256x1–120	$1.00

Due to trade tariffs all prices are subject to change without notice.

VECTOR with MMU

Third Generation 68030 Processor Accelerator for Amiga 2000
- Up to 32 MB of RAM
- RAM and SCSI avail. in 68000
- Over 25% faster than G-Force™
- Built-in 2630 Expansion Bus

25 Mb *$559.00*
33 Mhz and 40 Mhz .....Call

High Speed SCSI Controller
- SCSI-Share™ Networking
- Features PRoPLEX™
- 25, 33 or 40 Mhz
- Includes 68030/MMU & 68882 FPU

Only at Memory World!

MATH CHIPS AND CPUs

68030-RC-50 with MMU	$179.95
68882-RC-50	$135.95
80387-25 SX (Bridge Board)	$69.95
Crystal Oscillators (Call for Speed)	$10.00ea.
68882 PLCC	Call

Memory World
3070 Bristol Pike • Plaza I, Suite 213
Bensalem, PA 19020 • Attn: Amiga Dept.

PHONE ORDERS: 215-244-7930
FAX ORDERS: 215-244-7932

Prices Subject to Change without notice

VISA/MC/CHECK • Add $5.00 for Shipping & Handling • Add $18.00 for Overnight delivery • Add $8.00 for two-day deliver • Add $5.00 for C.O.D. • APO, AK, HI, Foreign shipping – call for rates • *10% Restocking fee* for return of non-defective items

Circle 93 on Reader Service card.

TO ORDER
CALL 800-544-6599
MON.-FRI. 9-6, SAT. 9-5 CST
INFORMATION/TECH SUPPORT/RETURNS 414-548-8125

MasterCard
VISA

EDUCATION-ENTERTAINMENT

Software

A-Train	43.99
African RainForest	32.99
Archer Maclean's Pool	34.99
Bard's Construction	31.99
Buzz Aldrin's Race Space	35.99
Campaign	36.99
Castles Campaign Disk	19.99
Conquest of Japan	36.99
Dark Seed	45.99
Digital Dungeon	47.99
Dune	36.99
Epic	39.99
Fighter Duel Pro	36.99
Fun School: Paint	31.99
Gunship 2000	42.99
Harrier Assault	39.99
History Line 1914-1918	45.99
Indiana Jones: Atlantis	37.99
KGB	19.99
Koshan Conspiracy	36.99
Legends of Valour	42.99
Lemmings II	37.99
Lotus III	37.99
Lure of the Temptress	31.99
MegaFortress Mission 1/2	27.99
Nigel Mansell's Champ	39.99
Pinball Dreams	24.99
Pinball Fantasies	32.99
Shadow/Beast III	37.99
Space Shuttle	32.99
Tom Landry Football	20.00
Vektor Storm	25.99
Voyager	73.99
Wing Commander	38.99
WordMaster	25.99
Zool AGA	38.99

Introducing new video tapes from Lee Stranahan!

- LightWave 3D: Essentials
- LightWave 3D: Modeler
- LightWave 3D: Surfaces
- Essentials: Techniques
- Essentials: CG
- Essentials: Toaster Paint
- Essentials: Video Toaster

Each only $33.99; buy any three for $96.00! Get help with the Toaster from an expert!

PRODUCTIVITY-UTILITIES

Software

600 Amiga Clip Art	22.00
A-Talk III	42.99
Aladdin 4D	309.00
AmiBack 2.0	47.99
AmiBack Tools	48.99
AMOS U.S.	65.99
AMOS Pro	86.99
Anim Workshop	55.00
Art Department Pro	148.00
Art Expression	149.99
ANIM VTR	57.99
Bars & Pipes Pro 2.0	245.00
Blitz Basic 2	99.99
Brilliance	149.00
C Net 2.6	75.00
Caligari24	249.00
Can Do 2.0	120.00
Charts & Graphs	49.00
Cinemorph	81.99
Deluxe Music II	80.00
Deluxe Paint IV AGA	119.00
Directory Opus 4.0	59.99
Easy AMOS	41.99
Essence/Imagine	47.99
Fractal Pro 5.0	87.99
High Speed Pascal	114.99
HyperCache	32.99
Image Master	145.00
LabelDex!	46.00
Lattice 6.0	249.00
Macro 68	125.00
Montage	339.00
Morph Plus	149.00
MiGraph OCR	249.00
MiGraph OCR Jr	110.00
Mini Office	75.00
Notebook	27.99
Origins	79.00
PageSetter II 3.0	59.99
PageStream 2.2	169.00
Pixel 3D Pro	119.00
PlayMation	299.00
Pop Arts/Toaster	32.99

Maxtor Drives w/ 1-year warranty

2585A IDE 85MB	249.00
25128A IDE 125MB	349.00
540 SL 540MB	1145.00
7120S 120MB	249.00
7213S 213MB	369.00
340 LXTS 340MB	649.00
535S LXT 535MB	1019.00
PO-12S 1.2 GIG	1369.00
P1-17S 1.7 GIG	1679.00
1240 S 1.2 GIG	1689.00

Maxtor

Commodore CDTV

INTERACTIVE MULTIMEDIA

CDTV Unit	545.00
CD Caddy 2-Pack	15.99
CDTV Prof Bundle	195.00
CDTV Genlock	155.00
CDTV Trackball	95.00
Connoiseur: Fine Art	29.99
Fred Fish Online1.5	45.00
Fred Fish Reg 1.6	45.00
Illustrated Dictionary	48.00
Karaoke Unit	**155.00**
Prehistorik	36.99
Sherlock Holmes: Consulting	43.99
Time Table/Science	48.00

BOOKS & MAGAZINES

A1200 Insiders' Guide	26.00
Amiga Intern	33.99
AMOS Gamemakers' Manual	27.99
ARexx Cookbook w/ Disks	37.99
DOS Ref Guide 4th Ed.	18.99
Mastering AMOS	29.00
Mastering Amiga/Beginners	24.00
Mastering Amiga DOS	26.99
Mastering Amiga Systems	36.00
Mastering Assembler	33.00
Mastering Toaster Tech	33.99

We carry ALL Euro magazines!

Commodore® AMIGA® PERIPHERALS

A520 RF Modulator	35.00
A570 CD ROM Drive	515.00
A2065 Ethernet Adapter	265.00
A2232 Multi-Serial Board	299.00
A2300 Int Genlock, 2000	145.00
A2320 Display Enhancer	225.00
A2386 SX BridgeBoard	535.00
AmigaVision Pro	199.00
Floppy Drive Int 2000	71.00
Floppy Drive 3000 HD	91.00
Monitor 1084	309.00
Monitor 1960	545.00
Mouse, 2-Button	45.00
Mouse, 3-Button	53.00

IN STOCK !! COMMODORE AMIGA 1200!

NEW

Commodore's newest AGA machine with 2 megs chip RAM and FAST 68020 processor! Harddrive systems are also available. Call for pricing.



TOP 10

❶ Amiga 1200	Call
❷ Amiga DOS 2.04 to 2.1	45.00
❸ Amiga DOS 2.1	85.00
❹ Harddrive Kit A1200	30.00
❺ Amiga 1200HD40	Call
❻ Video Adapter 15-23Pin	15.00
❼ ProWrite 3.3	55.00
❽ Final Copy II	37.00
❾ Maxtor 2585 IDE Drive	249.00
❿ Caligari24	249.00

Eureka®

512K Memory 500	36.00
601 w/ 1MB	75.00
MIDI	40.00
Mouse, Swifty	29.00
Mouse/Joystick Port	29.99
Multi-Face Card 2000	229.00
Scanner	149.00
Sound Enhancer	46.99
Sound Sampler	63.99

Pyramid®

VIDEO TOASTER 2.0

$1945.00

NEWTEK INCORPORATED

Authorized Panasonic Broadcast & TV Systems
Authorized RGB AmiLink Systems

Power Basic....58.99
Power Packer Pro....22.99
ProPage 4.0....169.00
ProDraw/ProPage Bundle..239.00
Professional Calc....168.99
Profills 2.0 #1....33.99
Profills 2.0 #2....33.99
Proper Grammar II....59.99
PSImport....58.00
QuarterBack 5.0....45.00
QuarterBack Tools....53.00
Real 3D Classic....105.00
Resource....125.00
SMPTE Output....149.00
Scala MultiMedia 210....299.00
Scape Maker 3.0....42.99
Studio Print....63.99
Super DJC II....33.99
SuperBase Prof 4....185.00
SuperBase Personal 4....10.00
Super Jam 1.1....88.99
Toaster Vision....130.00
True Print/24....56.00
Type Smith....124.00
Visionaire....87.99
Virtual Reality 2.0....59.99
Vista Pro 3.0....59.99
WaveWriter....79.00

HARDWARE

Hardware

1x32 4-Meg Module....149.00
2x32 8-Meg Module....265.00

8-Meg RAM Board for the Data Flyer SCSI Controllers. Fits the A1000, 500, and 2000.

Data Flyer RAM Board 0K.99.00

DATAFLYER *Express*



In your choice of SCSI, IDE, or SCSI/IDE Combo. Uses any LPS drive. Great looking chassis!

IDE....165.00
SCSI....175.00
Combo....195.00

EXPANSION SYSTEMS

Syquest Drive Packages

New model! 88MB 5110C - reads and writes 44MB formatted cartridges, too! Only $429 (Bare drive)

	Int	Ext
44MB	$359	$459
88MB	$549	$625

Bundles include drive, cartridge, manual and cable. External bundles include case.

SPECIALS

A PERFECT PAIR!

Pixel 3D Pro....119.00
Alfa Scan + Scanner w/ Touch-Up Software and Merge-It....$185.00
Buy the bundle for....$295.00

AD 1012....495.00
AD 516....1249.00
AdFlicker Free Video 2....239.00
Agnus Chip Puller....12.00
AMAX II+....345.00
Black Burst Generator....175.00
Boing! Mouse....84.00
CD Rom Drive, Ext Chinon.535.00
CD Rom Drive, Int Chinon .425.00
Controller, GVP 2000 8/0...169.00
DCTV....299.00
DCTV RGB Converter....209.00
DeJa Vue....415.00
Floptical Drive, Int DMI....389.00
Floptical Drive, Ext DMI....570.00
Floptical Drive, 3000 DMI..399.00
Floptical Media....25.00
FrameGrabber, Spectrum..475.00
Harddrive, 42Q ELS....215.00
Harddrive, 127Q ELS....329.00
Harddrive, 170Q ELS....359.00
Harddrive, Impact 500/120..499.00
Harddrive, Impact 500/213..625.00
Joystick Adaptor, Analog....14.99
Joystick, Ergo....20.00
Joystick, SpeedKing....19.00
Joystick, SpeedKing Analog.23.00
Keyboard Overlay/DCTV....12.00
Keyboard Overlay/Toaster....26.99
KickStart Switch 600....39.00
Kitchen Sync....1389.00
MBX 4/0K 14MHz....155.00
MBX 4/0K 28MHz....215.00
MBX 4/0K 14MHz / Clock..169.00
MBX 4/0K 28MHz / Clock..239.00
MIDI Connector....48.00
MegaChip 2000 w/ Agnus..215.00
Modem, Zyxel 1496E....379.00
Mouse Game Pad....25.00
Mouse/Joystick Switch....29.00
One Stop Music Shop....629.00
OpalVision....849.00
Perfect Sound....69.00
Personal SFC....359.00
Personal V Scope....729.00
Personal VDA....125.00
Phone Pak, GVP....349.00

ROCTEC

Floppy Drive, Int 500..78.00
RocLite Ext Floppy Beige or Black....89.00
RocGen Plus....219.00
RocKey....249.00
RocGen Plus with RocKey....459.00
RocHard IDE/SCSI....185.00
RocHard 80/500....449.00
RocHard 120/500....449.00
RocTec Mouse....24.00
RocKnight Anti-Virus....30.00
RocMate....95.00

Supra

500RX/1 RAM EXPANSION $125.00



MODEMS

$245.00



SupraFaxModem V.32
SupraFAXModemV.32/V.42/V.42bis - Up to 9600 bps send and receive FAX or data

GP Fax Software....75.00
SupraFAXModem 14.4 Bare 299.00
SupraFAXModem 14.4 w/sw .345.00
SupraFAXModem 9600 Bare245.00
SupraFAXModem 2400+ w/sw....165.00
SupraModem 2400 Bare....75.00

HARD DRIVES

For the A500

SupraDrive 500XP 120MB .499.00
SupraDrive 500XP 213MB .599.00

MEMORY

512K RAM Expansion....39.00
500 RX/1....125.00
500 RX/2....165.00
500 RX/8....419.00
SupraRAM 2000 0K....95.00
SupraRAM 2000/2....150.00
SupraRAM 2000/4....215.00
SupraRAM 2000/6....275.00
SupraRAM 2000/8....339.00
Floppy Drive....75.00

OTHER GREAT SUPRA PRODUCTS

Power PC Board....259.00
SCSI Controller, 500XP....169.00
SCSI Controller, 2000....110.00
SCSI Controller, 1000....179.00
Series III Upgrade....35.00
Supra Turbo 28....169.00

Supra Corporation

Power Supply 2000 230W.120.00
Power Supply, Big Foot....99.00
Scanner, MiGraph/OCR Jr .299.00
Smart Port....54.00
TBC III....795.00
Toaster Cozzy....549.00
WIZ Tablet....229.00

FONTS FOOTNOTE

600 Amiga Fonts....20.99
Broadcast Fonts 3D/Lightwave....83.99
Kara Fonts: Toaster....59.99
Kara Fonts: Headlines IV....47.99
Kara Fonts: ANIM 5....37.99
ProStream Plus Fonts.44.99
Western Fonts....21.00

GVP GREAT VALLEY PRODUCTS

G-Force 68030 Accelerators
25MHz/25/1MB....525.00
40MHz/40/4MB....749.00
40MHz/40/4MB/120...999.00
40MHz/40/213....1159.00
50MHz/50/4MB/120.1499.00
Memory Upgrade 4MB.189.00
DSS Sound Digitizer....69.00
G-Lock Genlock....399.00
I/O Entender Board....175.00

New Lower Prices!

SAFE HARBOR COMPUTERS

2120 E.MORELAND BLVD. SUITE L, WAUKESHA, WI 53186

Circle 44 on Reader Service card.

From p. 72.

SHORT TAKES By Peter Olafson

Zool
UChess
Giger-Tetris

The first AGA games have started to trickle in, and as you might expect, they're a rather mixed lot. The first commercial offering is an enhanced version of Gremlin's Zool (about $35). He's the ninja ant who runs around zapping blobs and picking up sweets. (He's an ant, after all.) It's a grand old platform game of the sort practiced by Mario and Sonic, with sticky fingers in lieu of the former's inveterate cuteness and the latter's demonic speed. The graphics, while good, are a little too childish for my taste—the poster and stickers enclosed with the game give away the intended audience—but it's also a bit tougher than standard platform fare. If you already have the original Zool, I wouldn't bust a gut racing to feed this to your A1200. The changes seem to be only cosmetic: elabor-ate backdrops where none existed before (which have the effect of better camouflaging the game's critters), more music, and the same play as the original.

Roger Uzun's freeware UChess (widely available) is very pretty, keeps getting better (the latest is version 2.25), and boasts a creditable record against reputable, commercial chess games. Trouble is, its system requirements are a bit on the video workstation side—10 megs for the full-blown "L" version and four for the standard version. How about a two-meg version for us Idiot's Mate specialists, Rog?

Finally, there's Giger-Tetris, which I've found (as TETRIS.DMS) only on The Forge, an excellent BBS in the Kingston, Ontario area. It's from a Danish shareware outfit called Panic Productions and is a glossy version of the classic falling-block game with one of the Swiss artist's alien-woman-in-black-scuba-gear paintings as the playfield backdrop. Just the thing to play during a break from Darkseed. And stylish, too.

The Addams Family

It's showtime! Look out behind you, Mario. Gomez is creeping up. The leader of this odd brood wears the same crazy, devil-may-care grin throughout the game. It's as though he's having fun, and well he should. This Ocean production ($49.95)—inspired by, but not truly based on, the inane movie—is light, frothy stuff: huge levels, tons of secret areas, interesting challenges in jumping and swimming, and immediate access to many regions via the central stairway of this ramshackle house. At the same time, it's all a bit spartan and broadly drawn for this sort of game, and I suspect more could have been done with backgrounds and sprites.

Populous II: The Challenge Games

Were this data disk from Electronic Arts simply a bunch of extra worlds to take over in Populous II, this review would begin and end with one sentence: More of Populous II. To be sure, 500 very nice new worlds have been ►

MORE SHORT TAKES

included, along with a new Japanese graphic set, and an additional (and particularly annihilatory) God command.

But that's only half of The Challenge Games ($29.95). Also provided are 42 problem-solving "challenges" keyed to survival of your itty-bitty people rather than simple demolition of The Other Side. This is a wonderful twist, making for almost a whole new game. (It does require Populous II, however.) Highly recommended.

Multiple Wessonality

The folks at Wesson International apparently don't do things halfway. I was expecting a couple of data disks for their Tracon II air-traffic-controller sim when a bulky parcel turned up and no fewer than 15 of them spilled out ($19.95 each). They cover a very healthy portion of the globe, with three for Australia alone. This is sort of akin to subLOGIC releasing scenery disks for the whole earth, plus bits of the moon and Mars, in one bash. An act of dedication if I ever saw one. Bravo.

Recantation Dept.: Apparently the voices in the parent game don't use the Say utility, as I claimed in the review a few issues back. They just sound as though they do.

Ashes of Empire

Mike Singleton strikes again and, once again, hits home. Ashes of Empire (distributed by Electronic Innovative Design; about $50)—a vast mixture of strategy, arcade, and resource management—is basically Midwinter III. You've been enlisted to stabilize, province by province, a none-too-well-disguised version of the post-Cold-War USSR. That means 3-D travel and combat in scads of different vehicles, negotiating, and stockpiling supplies.

That task is dizzyingly complicated—even compared to the already complex Flames of Freedom—and could have used a proper keyboard overlay or just a quick-reference card instead of the punch-out cardboard counters that we're supposed to place over the relevant keys. ("Lose me!" they scream at me.) But you'll appreciate the introductory NTSC video that leads you through the pacification of a sample province. Thanks a bunch, Mike. You just used up my spare time.

Megatraveller II: Quest for the Ancients

The second part of Paragons's Megatraveller series is enormous—it has around 100 planets—and sometimes size itself is a blessing. In Quest for the Ancients ($59.95) it's a mite dull. A lot of detail has been lavished on this game—like an on-line encyclopedia—but the myriad cities just seem too much alike, and it's hard to stay involved when the game creeps along at this speed. The nicest thing about the game is the "PAL" system, which, when enabled, allows each character to assume the role to which he or she is best suited in a given situation. It made me feel as though I was playing with other people—not just subroutines—and that feeling is priceless. Alas, the game's also a bit buggy. More than once I found myself trapped in conversations I couldn't escape except by rebooting. ■

TRI STATE COMPUTER

15 YEARS OF EXPERTISE & SERVICE

160 BROADWAY, NEW YORK, N.Y. 10038 (BETWEEN LIBERTY ST. & MAIDEN LANE) • OPEN 9-6, FRI. 9-1:30, SUN. 10-4

INFO: (212) 608-1391/349-2555 • ORDERS: USA & CANADA: (800) 537-4441

FAX US YOUR ORDER OR INQUIRY (212) 962-4635 • ESTABLISHED 1977 • SE HABLA ESPANOL

"Your Video Toaster—Commodore® AMIGA® Headquarters"

NEW! Epson ES600C
24 Bit Color Scanner w/ ASDG Driver
$899.95
ES800C $1119.95

DCTV-NTSC
Digitizer & Display Device
Frame Buffer w/ 24 Bit Paint
Millions of Colors **$279.95**

EDITIZER
True A/B Roll • Multi Format Editor
Toaster Control • DPS TBC Control
$1839.95

AUTHORIZED FULL SERVICE Commodore® DEALER



Take Advantage of These Once in a Lifetime Prices!! Supplies are running low!



A-2000	599.95	A-570 CD Rom	369.95
A-2000-HD-100	899.95	A-2386 Bridgeboard	299.95
A-3000-16/40	1119.95	A-2320 F Fixer	129.95
A-3000-25/100	1499.95	A-2630	389.95

A4000 SYSTEM 040 .... NEW   C-30 .... CALL!

KITCHEN SYNC
2 CHANNEL TBC
$1239.95
LTD QUANTITIES

GOLDEN GATE
486SL 25 MHz **$969.95**
386SX **$619.95**

OPALVISION
$849.95 Free Imagine 2.05
Amiga A1200 CPU
LOWEST

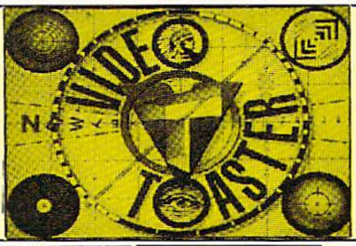
SOFTWARE

Final Copy 2.0	88.50
Pagestream 2.2	168.95
Art Dept. Pro 2.1	148.95
SAS Lattice C V6.0	224.95
Caligan 24	239.00
AMAX II Plus	324.95
DeskJet 500C Driver	39.95
Imagine 2.0	224.95
Real 3D	CALL
Pixel 3D Pro	125.95
Image Master	127.95
Morph Plus	146.95
Broadcast Titler II	Super Price
Pro Video Post	197.00
Screenmaker	LOWEST
Avideo 24	CALL
Avideo 12	CALL
Trexx Pro	LOWEST
Toaster 2.0 Upgrade	289.95
Pro Page 3.0	165.00

TBC's & GENLOCKS

DPS Personal TBC III	769.95
DPS TBC 230	1499.95
DPS Personal V Scope	729.95
Prime Image TBC PCB S in-out, with remote control	869.95
Hotronics AP41	949.95
The Personal SFC	359.95
Progressive Per Minigen	184.95
Supergen 2000 Genlock	1349.95
Instructional Videos, Books	CALL

VIDEO TOASTER 2.0
$1864.95!



Commodore AMIGA



A-600 LOWEST
IDEK 5017 MONITOR for all Amigas **$899.95**

DRIVES

Syquest 44 Meg Int. Drive	274.95
Syquest 44 Meg Cartridge	68.95
Syquest 88 Meg Int. Drive	374.95
Syquest 88 Meg Cartridge	99.95
Syquest Cleaning Kit	24.55
Ext. Chassis Power Supply	99.95
3½" Internal Floppy A-500	CALL
3½" A3000 Internal	CALL
3½" Ext. Air Drive	79.95
Maxtor LXT 213 SCSi	LOWEST
3½ Roctec Internal Floppy	CALL
Supra 500XP 53MB HD w/512K	529.95
Quant. 52MB SCSi LPS HD	229.95
Quant. 105MB SCSi LPS HD	326.00
120MB SCSi LPS	334.95
Conner 170MB SCSi HD	319.95
Quantum 240MB SCSi HD	569.95
Maxtor 1.2 GiG	1599.95
Dataflyer 500	CALL
Dataflyer SCSi Controller	CALL
Dataflyer Express	CALL

We will not be undersold! Call if you need a price beat!

IVS Authorized Dealer

Trumpcard 500 Classic	124.95
Trumpcard 500/META 4	184.95
Grandslam 500	289.95
Grandslam 2000	232.00
Trumpcard Pro	139.95
Trumpcard 500 AT	164.95
Vector 030-25-0K	569.95

VECTOR — THIRD GENERATION 68030 PROCESSOR ACCELERATOR
• 68030 & 68000 Share Accelerator, SCSi & RAM
• Exp to 32 meg RAM
• Uses Industry Standard Simms
• Built in Trumpcard Pro

EXPANSION SYSTEMS

DataFlyer Series

DataFlyer Express 500		DataFlyer 500	
		SCSI	119.95
		IDE	114.95
SCSI	169.95	SCSI/IDE	154.95
IDE	154.95	**DataFlyer Ram**	
SCSI/IDE	199.95	8 meg Ok	79.95
DataFlyer 2000		**Baseboard**	
SCSI	64.95	601c	39.95
IDE	64.95	601	29.95
SCSI/IDE	109.95	A500 Baseboard	109.95

PERIPHERALS

Toaster Cozzy	529.95
A2320 Disp. Enhancer (A2000)	129.95
Super Fax Modem w/ Software	319.95
Microbotics VXL 030 25	249.95
Microbotics VXL 030 40	LOWEST
CDTV w/ Pro Upgrage	STOCK
All Computer Safeskins	CALL
Optical Mouse	48.95
Midi Controller (4 outs)	39.95
One Stop Music Shop	569.95
Microbotics 8up! Dip. 2meg	CALL
Flicker Free Video II	229.95
ICD—All Products Available	CAL
CSA Rocket Launcher	CALL
AD 516 w/ Studio 16	CALL
AD 1012 w/ Studio 16	CALL
Mercury A3000/Imagine 2.0 Bundle	2099.00
DKB-Megachip 2000/500 w/ Agnus	269.95
Multistart II	36.50
DKB 2632 RA Exp/112/4 Meg	399.95

IF YOU DON'T SEE WHAT YOU'RE LOOKING FOR, PLEASE CALL

SOFTWARE

Arock Masterpiece Fonts-Toaster	139.95
1st Prize Toaster Fonts	39.95
Masterpiece Fonts	158.50
Showmaker	239.95
Kara Fonts Headlines 3	45.95
Kara Animfonts (1-3)	29.50
Brilliance	CALL
Image F/X	CALL
Disney Animation Studio	78.00
The Director V 2.0	72.50
Animatrix Modler	CALL
Map Master (Imagine)	44.00
Scenery Animator	57.50
Scenery Animator Disk	18.50
Morphus	CALL
Vistapro 2.0	84.95
DPaint 4.1	105.95
Dr. T's 3.5 Lev. II KCS	229.95
Diskmaster II	39.95
Directory Opus 4.0	69.95
Bars & Pipes Pro	207.95
Toaster Toolkit 1.1	129.95
Toaster Vision	109.95

MONITORS

Commodore 1084S	279.95
Commodore 1960	479.95
Pan. CT-1382Y	234.95
Sony CPD 1304S	579.00
Sony CPD 1604S	999.95
Panasync 1881i	319.00
Nec MS 2A	369.95
Nec MS 4FG	729.95

Tristate is a full service dealer for pros and amateurs alike. We carry everything in Video & Editing

GVP Authorized Dealer — We guarantee lowest prices!!!

A500 HD8+0/40-11	449.95	DSS8 Sound Studio	69.95
A500 HD8+0/120Q-11	599.95	Combo 030-25/1/10	524.95
A500 HD8+0/240Q-11	CALL	Combo 030-40/4	685.95
A500-PC 286/512	CALL	Combo 030-40/4/120	CALL
AT Once + PC emulator	169.95	Combo 030-40/4/240	CALL
A2000 HC8+0MB	CALL	G Force 030-50/4	1229.95
A2000 HC8+0MB/80Q-11	449.95	Combo 030-50/4/120	CALL
A2000 HC8+0MB/120Q-11	CALL	Combo 040-33/4	1329.95
A2000 HC8+0MB/240Q-11	CALL	GVP A-530 Turbo/120	769.95
A2000 RAM 8/0	CALL	Sim32-4MB/60	174.95
1MBx8MB SIMM (2MB)	CALL	S11 030 HD Disk Mt. Kit	CALL

AmiLink CI
Editor Headquarters

A/B Roll System (AG 1960)	CALL
Cuts Only System (AG 1960)	CALL
Toaster Control Module	CALL

ROCTEC AUTHORIZED DEALER

Roctech Superslim Anti Virus/No Click	84.95
Rockey	299.95
Rocgen Plus	289.95
Combo Deal	574.95
Rocmouse	23.95
A500 Int. Drive	CALL

PANASONIC INDUSTRIAL

AG 7750 Single Frame Accurate TBC, Built in serial controlled **IN STOCK** Perfect for Toaster

AG 7650 Built in TBC 32x search companion to AG 7750

AG 770 Controls AG 7750 & AG7650

AG F700 Time Code Reader Card STOCK

CALL FOR SYSTEM DISCOUNTS

AG-1970	CALL
AG-450 SVHS w/ case	1139.95
AG-460 2 chip SHVS w/ case	2899.95
AG-185U	CALL
AGW1	1735.95
AG-190U	STOCK
WV200 CLE	CALL
AG-7400 Port. SVHS	CALL
AG-1730	SPECIAL
CT-1382Y	234.95
AG-1260 4HD Ind. VCR	259.95

MasterCard • VISA • DISCOVER . COD's accepted. Overnight shipping available. 15 day money back guarantee. All merchandise brand new. Factory fresh. Custom configurations our specialty.

LIST OF ADVERTISERS

Reader Service Number

Reader Service Number

This index is provided as an additional service. The publisher does not assume liability for errors or omissions.
* This advertiser prefers to be contacted directly.

NOTICE TO ADVERTISERS

All advertising is subject to the approval of the Publisher and *AmigaWorld* reserves the right to refuse advertising without notice.

The advertising herein that has been typeset and/or designed by *AmigaWorld* is the property of *AmigaWorld*, and not that of the advertiser. The advertiser has purchased the right of reproduction in *AmigaWorld* only, and does not have the right to reproduce the ad in any other publication without the expressed written consent of *AmigaWorld*.

Advertisers and/or their agencies assume the responsibility for the condition of the contents of the advertising printed herein and agree to indemnify the Publisher of *AmigaWorld* for any claims and/or expenses incurred therefrom.

AmigaWorld is not responsible for changes to artwork after the given advertising deadlines, nor assumes responsibility for mistakes, misprints, or typographical errors, and will not issue credits of any kind for such errors.

AmigaWorld advises advertisers that statements regarding shipping and handling charges, warranties and/or money-back guarantees should be included within all forms of advertising in *AmigaWorld*.

The opinions expressed in the articles and advertising appearing herein are those of the authors and/or

Advertising Inquiries should be directed to Advertising Offices, *AmigaWorld*, 80 Elm St., Peterborough, NH 03458; telephone: 800-441-4403. **Subscription problems or address changes:** Write to *AmigaWorld*, Subscription Dept., PO Box 595, Mt. Morris, IL 61054. **Problems with advertisers:** Send a description of the problem and your current address to: *AmigaWorld*, 80 Elm St., Peterborough, NH 03458, ATTN.: Mary McCole, Customer Service Liaison.

AmigaWorld is a publication of International Data Group, the world's largest publisher of computer-related information and the leading global provider of information services on information technology. International Data Group publishes over 181 computer publications in more than 58 countries. Thirty million people read one or more of International Data Group's publications each month. International Data Group's publications include: ARGENTINA's *Computerworld Argentina, Infoworld Argentina*; ASIA's *Computerworld Hong Kong, Computerworld Malaysia, Computerworld Southeast Asia, PC World Hong Kong, PC World Malaysia, PC World Singapore;* AUSTRALIA's *Australian Macworld, Australian PC World, Computerworld Australia*; AUSTRIA's *Computerwelt Oesterreich, PC Test*; BRAZIL's *DataNews, Mundo IBM, Mundo Unix, PC World, Publish!*; BULGARIA's *Computerworld Bulgaria, Ediworld, PC World Express;* CANADA's *Direct Accesss, Graduate Computerworld, InfoCanada, Network World Canada*; CHILE's *Computerworld, Informatica*; COLUMBIA's *Computerworld Columbia*; CZECHOSLOVAKIA's *Computerworld Czechoslovakia, PC World Czechoslovakia*; DENMARK's *CAD/CAM WORLD, Communications World, Computerworld Danmark, Computerworld Focus, Computerworld Uddannelse, LAN World, LOTUS World, Macintosh Produktkatalog, Macworld Danmark, PC World Danmark, PC World Produktguide; Windows World*; ECUADOR's *PC World*; EGYPT's *PC World Middle East*; FINLAND's *Mikro PC, Tietoverkko, Tietoviikko*; FRANCE's *Distributique, GOLDEN MAC, InfoPC, Languages & Systems, Le Guide du Monde Informatique, Le Monde Informatique, Telecoms Reseaux*; GERMANY's *Computerwoche, Computerwoche Extra, Computerwoche Focus, Computerwoche Karriere, edv aspekte, Information Management, Macwelt, Netzwelt, PC Welt, PC Woche, Publish!, Unit*; HUNGARY's *Computerworld SZT, PC World*; INDIA's *Computers & Communications*; ISRAEL's *Computerworld Israel, PC World Israel*; ITALY's *Computerworld Italia, Lotus Magazine, Macworld Italia, Networking Italia, PC World Italia*; JAPAN's *Computerworld Japan, Macworld Japan, SunWorld Japan*; KENYA's *East African Computer News*; KOREA's *Computerworld Korea, Macworld Korea, PC World Korea*; MEXICO's *Compu Edicion, Compu Manufactura, Computacion/Punta de Venta, Computerworld Mexico, MacWorld, Mundo Unix, PC Journal, Windows*; THE NETHERLANDS' *Computer! Totaal, LAN Magazine, Lotus World, MacWorld Magazine*; NEW ZEALAND's, *Computerworld New Zealand, New Zealand PC World*; NIGERIA's *PC World Africa*; NORWAY's *Computerworld Norge, C/world, IDG Direct Response, Lotusworld Norge, Macworld Norge, Networld, PC World Ekspress, PC World Norge, PC World's Product Guide, Publish! World, Student Guiden, Unix World, Windowsworld*; PERU's *PC World*; PEOPLE'S REPUBLIC OF CHINA's *China Computerworld, Consumer Electronics New Product World, Electronics International, New Product World, PC World China*; THE PHILIPPINE's *Computerworld, PC World;* POLAND's *Computerworld Poland, PC World/Komputer;* ROMANIA's *Infoclub Magazine*; RUSSIA's *Computerworld-Moscow, Networks, PC World*; SOUTH AFRICA's Computing S.A.; SPAIN's *Amiga World, Autoedicion, Communicaciones World, Computerworld España, Macworld España,Network World, PC World España, Publish!, Sunworld*; SWEDEN's *Attack, CAD/CAM World, ComputerSweden, Corporate Computing, Datalngenjoren, Lokala Natverk/LAN, Lotus World, MAC&PC, Macworld, Maxi Data, Mikrodatorn, PC World, Publishing & Design (CAP), Windows*; SWITZERLAND's *Computerworld Schweiz, Macworld Schweiz, PC & Workstation*; TAIWAN's *Computerworld Taiwan, Global Computer Express, PC World Taiwan*; THAILAND's *Thai Computerworld*; TURKEY's *Computerworld Monitor, Macworld Turkiye, PC World Turkiye*; THE UNITED KINGDOM's *Lotus Magazine, Macworld, Sunworld*; THE UNITED STATES' *AmigaWorld, Cable in the Classroom, CIO, Computerworld, DOS Resource Guide, Electronic News, Federal Computer Week, GamePro*, IDG Books, *inCider/A+, InfoWorld, Infoworld Direct, Lotus, Macworld, Multimedia World, Network World, NeXTWORLD, PC Games, PC Letter, PC World, Publish!, RUN, SunWorld, SWATPro*; VENEZUELA's *Computerworld Venezuela, MicroComputerworld Venezuela;* YUGOSLAVIA's *Moj Mikro*.

"Now listen, Tank, when this 300 pound bug gets in your way, run a dynamic link library around it. You know what the other team's got so you'd better go over our playbook and learn about object inheritance, operator overloading, and virtual destructors. Better yet, telnet to BIX and get into their Objective C huddle and go over strategies with the other BIXen, they're real pros. After you've reviewed all the plays, send Internet mail to my old buddy RAM at genvid.com to get his feedback. Let me give it to you straight, Tank, if you ever want to get off the bench and become a Hall of Famer, you'd better sign up with the BIX team."

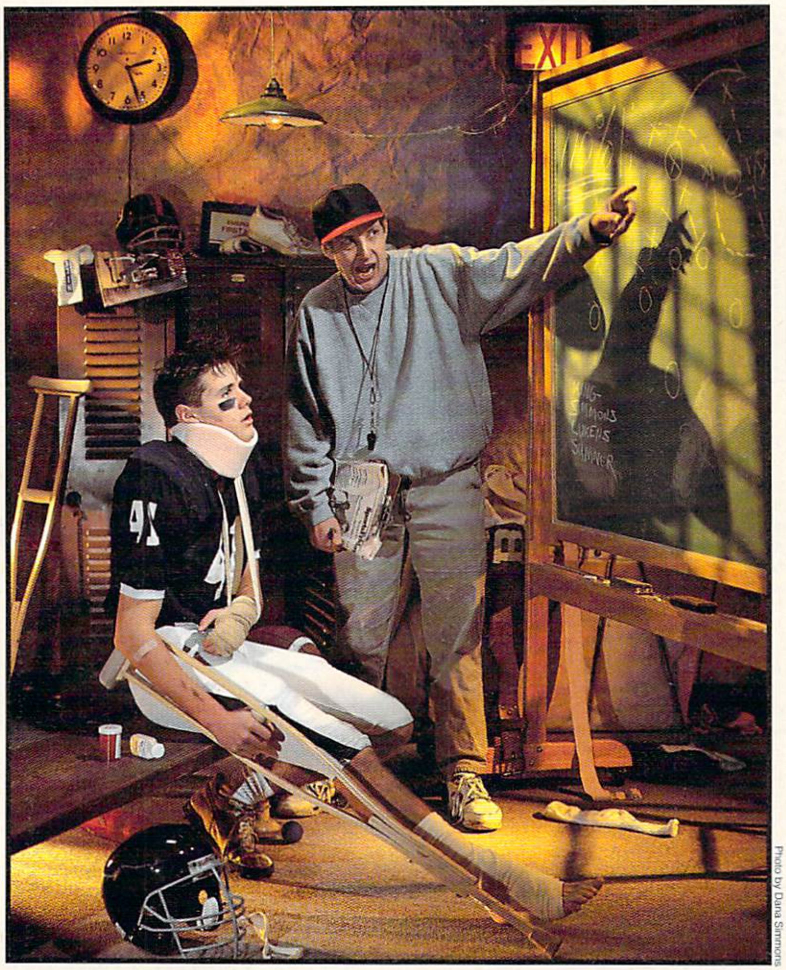


Photo by Dana Simmons

Further details and complete rate information are provided during registration. Using any communications program, dial 1-800-695-4882. At the "logon" prompt enter bix. Then at the "name?" prompt enter bix.amw35. If you have any questions, call us at 1-800-695-4775 (voice). Or fax us at 617-491-6642. Send Internet mail to bix@genvid.com. Windows users order BIXnav, our graphical front-end for BIX. Details are available online.

BIX

If you can hack it

The GRAPEVINE GROUP INC.

• NORTH AMERICA'S LARGEST SUPPLIER OF AMIGA CUSTOM CHIPS AND SPECIALTY PARTS •

OUR 13TH YEAR

ONLY AT GRAPEVINE

NEW AMIGA 500 MOTHERBOARD

Now for the first time, and **only** at Grapevine, purchase a NEW A500 PC motherboard at prices lower than an Amiga dealer pays! Each "board" is populated (all chips), tested and has a 90 day warranty. Contains 1.2, (2) 8520, 5719, 8362, 8364, 68000-8 and ½ meg Agnus. The plug-in chips alone cost over $137. Revisions vary **$94.95**

A2000 AMIGA COMPUTER

Imagine an Amiga 2000 with all the latest chips (8372 Agnus, **8373 Super Denise, New 2.0 ROM,** 2.0 Workbench disk, new keyboard, mouse & manual) for hundreds of dollars less than a dealer pays! This A2000 reconditioned demonstrator offers you a fantastic savings over buying a new one and comes with a full 90 day warranty. NTSC or PAL (110/220 volts). This is a once-in-a-lifetime offer will save you hundreds of dollars. Get them before supply runs out **$525.00**

IBM XT COMPUTER

IBM has closed some of its facilities and the Grapevine Group has been able to buy sizable amounts of IBM XT Computers at phenomenal prices. If you ever wanted to own an IBM, here's your chance. IBM XT, 5¼" floppy, 10 meg hard drive, VGA or color card for as low as..**$149.95** Call for other options such as special keyboards, monitors and hard drives.

SWITCH ITT™

WORLD'S BEST SELLING A500/2000 1.3-2.0 ROM SELECTOR

(NOW WITH A ROM SPEAKER FOR VERIFICATION AND SPECIAL CIRCUIT FOR A500 REV. 5 AND OLDER)

Electronic ROM Selector Switch by Global Upgrades, Inc. allows for compatibility of ALL your software. Automatically switch between 1.3 or 2.0 ROM from your **keyboard**. Built-in speaker confirms 1.3 or 2.0 ROM. Does not overlap the 68000 chip, which means complete compatibility with AdSpeed or Mega Midget Racer, etc. Simple plug in, no soldering. Lowest priced keyboard switch available. Instructions included.................................. **$29.95**

FANTASTIC BONUS:

- Buy the Switch-Itt with 1.3 ROM upgrade @ **$47.50**
- Buy the Switch-Itt with 2.05 ROM upgrade @ **$56.95**
- THE ULTIMATE DEAL: Buy the Switch-Itt with 1.3 and 2.05 @ **$79.95** (Want entire kit? Add $47.50)

2.1 SYSTEM UPGRADES

NEW 2.05 ROM JUST RELEASED

- **2.04 ROM chip** only (no books or diskettes)..**$34.95**
- **2.05 ROM chip only; NEW, latest enhanced revision for high density drives, PCMCIA slot, etc $35.95**
- **2.1 Complete Kit (#AS215):** includes ROM, books and diskettes. Newly upgraded **$77.50**
- **2.1 Kit (#AS216):** Same as above but does NOT include 2.0 ROM (for upgrading your old 2.0 kit) **$47.50**
- **2.04 ROM Upgrade Kit (#AS314)** for A3000 .... **$45.50**
- **2.04 A2620/2630 ROM Upgrade Kit............ $34.95**

FATTER AGNUS (1MB) UPGRADE

8372A $44.95

Kit comes with FREE Goliath Agnus chip puller (a necessity), step-by-step instructions, the NEW **Amiga Troubleshooter** diagnostic guide (valued @ $12.95), and diagnostic software. These valuable extras are an exclusive BONUS package only available from Grapevine. (We'll beat any legitimate competitor's price on the Agnus chip and still give you the diagnostics and Goliath chip puller.)... **$44.95**

LET US CURE YOUR PRINTHEAD PROBLEMS

• LOW COST PRINTHEAD REPAIR •

Don't throw out your old/worn printhead. For a fraction of the cost of a new one, we will refurbish or remanufacture it to factory specifications for you. SAVE UP TO 70%. One year warranty/6 day turnaround (400 types done). For example: Okidata 80/90/100 heads are $69.00; Epson (9 pin) EX/FX/LX are $79.00. Call for more information.

SUPER DENISE 8373 UPGRADE

UPGRADE TO THE LATEST REVISION

New 8373 ECS Super Denise chip adds new screen modes. **Comes with Super Denise diagnostic disk and installation software programs** which is exclusively available through the Grapevine **$29.95**

★ MONTHLY SPECIALS ★

A1200 Amiga Computer

- Package A: A1200 with extra 2 MB memory module included (total 4 MB) **$621.00**
- Package B: A1200 with extra 4 MB memory module included (total of 6 MB) **$794.00**
- OPTION: 85 MB Maxtor Hard Drive **$275.00**

Comes with full Commodore warranty.

Other package specials include hard drives and MicroBotics MBX 1200 Series. Call us for pricing combinations.

EXCLUSIVE SPECIALS

- **A2000 PC Motherboard:** Includes enhanced chip set (2.0 and 8372 Agnus). Limited quantity. 90 day warranty **$369.95**
- **Extractor Plus Kit:** Contains professional PLCC (Agnus)/DIP chip puller and much needed torx screw driver. (List price $12.95). Our Price **7.95**
- **200 Watt "Big Foot"** A500 Universal Switching Power Supply with fan and external cabling for hard disks, etc. An absolute must for those adding on more memory/peripherals (e.g. hard drive)..**$86.95**
- **A500 power supply** (factory fresh) **$46.50**
- **Burndy Chip Puller:** Commodore recommended Agnus chip puller. Part #QX1. List price $21.50. Our price **$9.95**
- **A2000/3000** 110/220 VAC power supply (U.S./U.K.) Commodore original............. **$99.00**
- **A1050** (new) 256K module for A1000. This module plugs into the front of the A1000 .... **$29.95**
- **High Density Drives** for A2000/A3000 (specify)..**$99.00**
- **A2058** 2 Mb Amiga 2000 RAM board. Comes with 2Mb. Expands to 8 Mb (low price)...........**$124.50**
- **Swifty 3 Button Mouse** from Pyramid........ **$22.50**
- **A2088** XT Amiga add on kit. Brand new..... **$99.50**
- **Encoder Board** for A500 keyboard........... **$17.95**
- **A500 keyboard (312502).** Made by Commodore. British keyboard also available. NEW........ **$37.50**
- **A2000/3000 keyboard** (factory fresh) **$59.95**
- **GVP SIMM 32 - 4 Mb/60NS accelerator...$199.95**
- **Printer Port Adapter:** Interfaces any Commodore printer to PC/PC clone **$29.95**
- **Pro Port Analyzer:** Recommended by Commodore as a diagnostic helper. Works on all Amigas. Software and hardware **$80.00**
- **2090A** SCSI controller board for A2000 ...... **$17.95**
- **1084 Monitor Flyback Transformer** **$54.50**
- **A501 Clone:** 512K RAM Expander **$36.50**
- **Slingshot:** Gives A2000 slot for your A500. Now take advantage of all A2000 plug ins **$36.50**
- **Arcnet A560** adapter replacement **$21.50**
- **SupraTurbo 28:** Low cost 28 MHz accelerator..**$194.50**
- **Flicker Fixer** by Microway (NTSC or PAL)..**$219.95**
- **Flicker Blaster:** Low cost. Works like the Flicker Free Video & Flicker Fixer...................**$199.95**

A600/A1200 MEMORY UPGRADES

MICROCARD by Microworks Ltd.

Offers up to 4 additional megabytes of (fast) dynamic RAM via the A600/A1200 PCMCIA slot. This credit card sized memory module auto-configures at boot time, leaving most of the internal chip RAM free for image processing. No hardware or software configurations are needed and recognition is automatic.

A large percentage of the Amiga 1200 software now requires more than 2 megabytes of memory (2 meg in the A600) and certainly more than the standard memory built into each computer.

2 megabyte upgrade PCMCIA card **$134.95**
4 megabyte upgrade PCMCIA card **$214.95**

In Canada contact IT Tech in Saskatchewan (306) 691-0520.

AMIGA UPGRADE CHIPS

8362 Denise ½ Bright upgrade **$18.95**
8364 Paula.. **$14.95**
8373 New Super Denise with diag. instructions/software **$29.95**
8372A 1 meg Agnus: See full description above
8375 (new 2 Mb Agnus) A500 Plus & /A600 PAL only.... **$59.95**
5719 Gary chip **$14.95**
Gayle chip 391155-02 for A600 .... **$39.95**
8520A CIA chip. Controls 12 major functions (2 for $18) .. **$9.95**
1.3 Kickstart ROM low, low price with instructions **$21.95**
6570-036 Keyboard chip (fixes most keyboard problems)..**$11.95**
Panasonic 32K Printer Buffer Chip........................ **$15.95**
Citizen 32K Printer Buffer Chip.......................... **$15.95**
390229 Video Hybrid Chip (A500 only) **$11.95**

DKB PRODUCTS

ORDERS ONLY—1-800-292-7445
ORDER STATUS/CUSTOMER SERVICE
(914) 368-4242 or (914) 357-2607

1 MB REBATE

MegAChip 2000™ With 2 Meg Agnus Chip Included **$259.95**

2 MB of Chip RAM for A500/2000

STOP RUNNING OUT OF CHIP RAM. If you use your Amiga for *Desktop Video, 3D Rendering & Animation, Multimedia or Desktop Publishing,* then you need the MegAChip 2000. Fully compatible with Workbench 2.0, the ECS Denise chip, GVP's & Commodore's 68030 accelerators. Why upgrade to 1 meg of RAM when you can have the same high tech 2 meg chip RAM as the A3000? **Includes FREE Goliath chip puller (a necessity), Final Test diagnostic Agnus diskette program, new Amiga Troubleshooter & 2 meg Agnus chip installed & tested..$259.95**

NOTICE: The Goliath chip puller/diagnostic software is available exclusively from Grapevine.

Buy the MegAChip from us and we'll give you the new 8373 Super Denise (ECS) for $25.95
We will beat any legitimate advertised price!

Insider II™ 1.5 Megs in Your A1000

Allows A1000 owners to add up to 1.5 meg of Fast RAM internally. User expandable in 512K increments using 256K x 4 Drams. Includes battery backed clock calendar. Simple installation. No soldering required. Compatible with the KwikStart II and most processor accelerators ...**$147.50** With 1.5 meg...**$188.50**

KwikStart II™ Utilize 1.3 and 2.0 ROMS

Allows A1000 owners to install 1.3 and 2.0 Kickstart ROMS and switch between them. Upgrade to the latest operating system and still be compatible with software that requires Kickstart 1.3 .... **$59.95**

MultiStart II™ Switch between ROMs from your keyboard

Allows A500/2000 owners to install Kickstart 1.3 and 2.0 and switch between them *with the keyboard.* A sizable percentage of present software will be incompatible with the new 2.0. This simple device allows you to be compatible with *all your software.* No external wires or switches required.. **$34.50**

MULTI START BONUS

- Buy the MultiStart with 1.3 ROM upgrade @ **$52.95.**
- Buy the MultiStart with 2.05 ROM upgrade @ **$64.95.**
- The Ultimate Deal: Buy the MultiStart with 1.3 and 2.05 @ **$87.50.**

C64/128 COMMODORE CHIPS & PARTS AVAILABLE

9-6 ET Mon.-Fri.
PRICES SUBJECT TO CHANGE
We Ship Worldwide
15% restocking charge

3 Chestnut Street, Suffern, New York 10901 • Fax: (914) 357-6243
Order Status/Customer Service: (914) 368-4242 or (914) 357-2607 International Order: (914) 357-2424

Order Line Only 1-800-292-7445

The GRAPEVINE GROUP INC.

OUR 13TH YEAR

• NORTH AMERICA'S LARGEST SUPPLIER OF AMIGA CUSTOM CHIPS AND SPECIALTY PARTS •

AMIGA DIAGNOSTICS — WHAT'S NEW? — & EMERGENCY STARTUP KITS

EMERGENCY STARTUP KIT
A500/A1000/A2000

Stop sending out your Amiga for repairs. Save a lot of time and money by repairing your own. Over 90% of broken Amigas are easily repaired by this plug-in replacement kit. Kit corrects 28 symptoms and includes: Two 8520A CIA Chips, 8362, 8364, Chip Puller, Fuse, Schematic, **Amiga Troubleshooter**, the Final Test diskette and instructions.

*Emergency Startup Kit (#DIA 14). A $210.00 value for **$89.95**
Same as DIA 14 but with 8373 Super Denise (#DIA 14B) **99.95**
Same as DIA 14 but with 8372A 1 meg Agnus (#DIA 14C) **$129.95**
Same as DIA 14 but with 8373 and 8372A (#DIA 14D) **$139.95**

A2000 PC MOTHERBOARD

Refurbished by Commodore with all the latest chips (1 MB 8372A Agnus & 2.04 ROM chip). 90 day warranty. NTSC or PAL available **$369.95**
(We'll even buy back your faulty board)

STOP COSTLY REPAIRS
IT'S PROBABLY YOUR 8520 CIA CHIP

If your Amiga 500/1500/2000 shows the following symptoms, you MAY need a replacement of the most problematic (IC) chip in your Amiga, the **8520**. Areas affected by either of the two 8520 chips are: centronics port, RS232 port, joy stick port, mouse port, drive LED, drive motor, blank screen, green screen, boot and external drive problems. The 8520 is a simple plug in and will save you a lot of repair costs and down time. 40% or all broken Amigas are caused by bad 8520s. Simple plug-in chip.
852o CIA .... **$9.95 ea.** 2 8520 CIA for $18.00

THE *FINAL TEST* DIAGNOSTIC DISK
IS YOUR 1 MB AGNUS WORKING PERFECTLY?

Tests the functioning of the keyboard but its primary purpose is to run through and verify all the functions of the 8372 1 meg Agnus such as sound, new work bench, timing, real time clock, RAM test (both chip and fast), half bright function, HAM, blitter, sprites, double buffer animation, mouse, disk read/write, DF1/DFØ **$9.95**

AMI FLOPPY ALIGNMENT SYSTEM

High precision floppy drive alignment and performance monitoring system by Free Spirit. Test alignment, speed, read/write accuracy. Comes with program disk, calibration disk and manual **$27.50**

HOW-TO BOOKS & SERVICE MANUALS

- A500 Computerfacts: A complete professionally written manual of technical service data for the A500 that includes schematics, alignment/adjustment procedures, parts list, logic charts, voltages, troubleshooting and pictorial layouts. This 63 page service manual is the bible of repair books **$39.95**
- **C64** Commodore computer service manual **$17.95**
- **1571** Commodore computer service manual **$17.95**
- **A500** Commodore computer service manual **$17.95**
- **A2000** Commodore service manual (schematics only) **$22.50**
- **A3000** Commodore service manual (schematics only) **$44.95**

Call for books not listed

NEW AMIGA TROUBLESHOOTER™
$12.95

The Amiga Troubleshooter is a simple, east-to-use symptomatic guide to diagnosing faulty components (especially ICs) on Amiga computers

The AMIGA TROUBLESHOOTER takes you through logical steps leading you directly to the source of your problem in seconds. Over ninety percent of Amiga problems are readily fixed by simple substitution of integrated circuits (ICs) in existing plug-in sockets. The novice as well as the experienced technician will find it simple to use. No other tools or equipment are needed.

Developed by a group of Amiga Technicians, the AMIGA TROUBLESHOOTER addressed over thirty of the most common failures in the following catagories: power-up problems, Amiga keyboard, mouse/joystick port, video display, serial port, parallel port, disk drive, and audio problems.

Don't be misled by the price. This is a true Amiga diagnostic tool that performs well, saving you time and money on repairs. The C64 version of the Troubleshooter has sold over 45,000 copies.

TOP SELLER ADVANCED AMIGA ANALYZER
by Wilcom Australia Ltd.

A complete diagnostic hardware and software analyzer (uses point and click software interface). Sample displays shows status of all data transmission/signals: Tests game port function, parallel port, serial port, disk drive, video ports, memory (buffer) checker, system configuration and auto test. Reads diagnostic status of any read/write errors from track 0 to track 79. Software automatically tells what errors are found and the chips responsible. 85% to 90% of the problems presented to service centers are found with this analyzer. Saves you lots of money on repairs and no repair shop can afford to be without one. Don't be fooled by its low cost. Simply plug in cables from the analyzer box. This is a sophisticated diagnostic used by Amiga repair centers worldwide **$79.95**

GOLIATH CHIP PULLER

Exclusively designed for PLCC/Agnus chips. (Included free with Agnus kit) **$6.95**

EXTRACTOR PLUS KIT

Contains professional PLCC (Agnus)/DIP chip puller and much needed torx screw driver. List price $12.95. Our price **$7.95**

A500 POWER SUPPLY

Factory replacement. Larger components for cooler operation **$46.50**

300 WATT BENCH POWER SUPPLY

External power supply has all three Amiga connections built in. Now you can connect the A500/2000/3000 into one power supply **$169.95**

200 WATT BIG FOOT POWER SUPPLY

A500 universal switching power supply with fan and external cabling for hard disks, etc. An absolute must for those adding on more memory/peripherals (eg: hard drive) Works in all countries worldwide **$86.95**

LOW PRICED MEMORY

1 x 4/80 SC ZIP **$19.75**
1 x 1/80 DIP **$4.30**
256 x 4/70 DIP **$4.50**
1 x 8/80 SIMM **$33.95**
4 x 8/80 SIMM **$149.50**
1 x 32/70 (4 megs SIMM for A4000/MicroBotics) **$142.50**
2 x 32/80 (8 megs SIMM for MicroBotics) **$289.95**

ICD PRODUCTS

NEW **Trifecta.** High speed combo board .... **CALL**
Flicker Free Video 2. Eliminates flicker **$228.95**
AdRAM 540. Add up to 4 megs of RAM internally in your Amiga 500. With 1 meg. **$119.95** w/ 2 meg. **$149.95**
Each additional meg of memory add **$35.95**
IDE2. Hard drive interface (2½"/3½" HD Kit):
AdIDE2 + Shuffleboard (3½" interface kit) **$124.50**
AdIDE2 + Mounting Bracket (2½" interface kit) **$116.50**
AdSpeed: Best low priced accelerator **$164.50**
Kickback ROM selector switch **$34.95**

REJUVENATOR II A1000 UPGRADE

Allows 2MB of chip RAM. Contains 2MB Agnus, 8373 Super Denise, 2MB RAM, 2.0 ROM, 'Final Test' diagnostic software & Amiga Troubleshooter **$599.95**

MISCELLANEOUS PRODUCTS

BASEBOARD 601—1MB CHIP MEMORY CARD

Take the 1 MB memory in your A600 up to 2 MB of chip RAM. Installs in trap door. Contains battery and clock. By Expansion Systems. Fully populated with 1 MB of chip RAM **$59.95**

COMMODORE C64/C128 PRODUCTS

- 512K Model 1750 RAM Expander Unit: This is a new unit. Last chance to upgrade your computer to 512K **$89.95**
- Commodore 1670 (1200 Baud) Modem **$9.95**
- 4.3 amp C64 power supply: Extra heavy duty for added peripherals **$37.95**

12 A'CLOCK by MICROBOTICS
REALTIME CLOCK/CALENDAR EXPANSION FOR THE AMIGA 1200

The A1200 is just about perfect except for one thing: it really needs a clock. Now you can easily and inexpensively have one by installing the 12 A'Clock board internally on the clock-header connector on the 1200 motherboard. This simple-to-use peripheral can automatically set your Amiga's system time and date upon startup **$27.50**

MICROBOTICS 1200 MEMORY UPGRADES
MBX 1200 SERIES WITH FPU (Motorola 68881/68882 Floating Point Unit) WITH 32 BIT MEMORY (up to 8 MB) AND CLOCK

- **MBX 1200Z** with clock and 68882 20 MHz FPU **$176.50**
- **MBX 1200Z** with clock and 68882 25 MHz FPU **$229.95**
- **MBX 1200Z** with clock and 68882 50 MHz FPU **$329.50**
- **4MB wide bodied SIMM module** for above **$149.50**
- **8MB wide bodied SIMM module** for above **$289.95**

OUR BEST SELLING PACKAGE

- MBX 1200Z with clock, 68882-20 MHz FPU & 4MB SIMM module **$325.50**

People buy from The Grapevine Group because . . .

. . . We have low priced shipping
. . . We know our products! We have been in the Commodore/Amiga business since 1980.
. . . We have ***no surcharge*** on credit card orders as some other companies have.
. . . Our restocking is only 15 percent if a product is ordered in error (not 20 percent as some other companies).
. . . Our minimum telephone and BBS order is $15 in the U.S., Canada and APOs (rest of the world is $50).
. . . We stock more Amiga chips than anyone else.

Announcing: **The Grapevine Group BBS** Now you can place your Grapevine orders 24 hours a day! Our new BBS supports speeds between 300 and 2400 BPS. To order from our new on-line catalog, simply set your modem settings at 8N1 and call **914-343-VINE** (8463).

C64/128 COMMODORE CHIPS & PARTS AVAILABLE

Order Line Only **1-800-292-7445** 3 Chestnut Street, Suffern, New York 10901 • Fax: (914) 357-6243
Order Status/Customer Service: (914) 368-4242 or (914) 357-2607 International Order: (914) 357-2424

9-6 ET Mon.-Fri.
PRICES SUBJECT TO CHANGE
We Ship Worldwide
15% restocking charge

Circle 20 on Reader Service card.

HELP KEY

Will the AGA machines send the A500 hobbling off to the home for hi-tech has-beens? Also, CD-ROMs . . . and Fish.

By Tim Walsh

The A500: Still Fierce, or Fading Fast?

Q. *As an A500 owner, I am concerned with its future, given the recent releases of the A600 and A1200. Will the A500 fade into oblivion, much as the A1000? Should I get one of the new machines?*

Joseph Isaia III
Carpentersville, IL

A. Last month, I fielded common questions I've received from A2000 and A3000 owners who've wondered if the A4000 meant the demise of their machines. A500 owners—who, incidentally, constitute the bulk of our readership—share these concerns, especially in regard to the A1200.

Reliable sources indicate that Commodore is no longer producing the A500—no big deal, really, thanks to third-party hardware companies whose economic well-being hinges on the A500 market. In short, third-party companies are ensuring a long-term future for the machine. Additionally, classified computer ads bloom throughout the year with A500 listings, providing sources for parts.

I never tire of telling A500 owners that they have the basic framework for not only a fiercely fast computer, but also one nothing else can touch at near the price. My well-documented opinion (see our cover story in June '92) heavily favors excavating the A500's stock 68000 internals in favor of something of the 68030 persuasion.

While the following hardly constitutes a comprehensive list of upgrade products, here are some proven ideas: For around $500, you can breathe new life into your existing A500 system with a Cev Design XPander Chassis ($129) and add Zorro II slots to it in the process, or choose ICD's Trifecta 500 EC ($299) and add a low-cost IDE-type hard-drive controller. Loosen the wallet a bit more and opt for ICD's 500LX ($349) to give your A500 SCSI drive compatibility. Whichever combo you order, an AmigaDOS 2.1 upgrade kit ($99 with ROMs, $49 without) is a must. You could round out a sensible upgrade with either a low-cost ($199) Supra Turbo 28 68HC000 or Preferred Technologies' Blizzard Board ($259), for roughly a two-fold increase in processing speed.

For less than $1000, you can upgrade big-time, and turn your A500 into a barn-burner with a Commodore A570 CD-ROM ($499) coupled with a CSA Derringer 030 ($249), or a GVP 530 Turbo 40 MHz '030 accelerator equipped with a 120MB hard drive ($949). For $1295, you could pull out all the stops and install a 28 MHz 68040, as in the 040/500 from Progressive Peripherals.

Upgrading to the A1200 as an alternative to hopping up the A500 is purely a personal decision. By the time you read this, Commodore may have ended their Power Up program for the A1200 (termination date: March 31, '93). There's no official decision (yet) to extend this program, which, for $599, got you the A1200 with a copy of EA's DPaint IV and Softwood's Final Copy word processor. It's not the 68020-based performance of the A1200 that sets it apart from the A500, since the older machine can be made to outperform the newer one by leaps and bounds. Rather, the AGA graphics and Workbench 3.0 combination on the A1200 make it the most attractive, low-cost computer currently available.

However, if someone builds an AGA chip-set adapter for the A500. . .

Fishing For CD-ROMs

Q. *Last year, a company advertised the entire Fred Fish collection of freely distributable files on one CD-ROM for $50. What is the name of the company? Now that more Amiga CD-ROMs are available, I'm ready to make the leap.*

Donald Lipman
Highland Park, IL

A. The company is HyperMedia Concepts (5200 Washington Ave., Suite 226, Racine, WI 53406, 414/632-3766). For those unfamiliar, the Fred Fish collection has been around since, well, since forever, and now numbers over 800 disks. With the whole collection on one CD-ROM, it sure sounds like a cost-effective media investment to me.

If you have a modem and a network account, however, you can also access the entire Fred Fish collection on line, since the series' disks are available through both Portal and GEnie. There are two reasons why it's preferable to access it on line: First, it requires only a few moments to search for a disk (they're sequentially numbered) that contains a particular file or subject matter that you're seeking. The second reason is, while a CD-ROM can't be updated (you have to buy new ones as they're released), on line offerings are updated frequently. Almost as soon as a new disk is added to the collection, it becomes available on line. The on-line way seems like an attractive alternative to buying the collection on CD-ROM.

Finally, I'd like to pass along an inexpensive way to add a CD-ROM to any Amiga system: CDTV. While I haven't tried it, I've been told the Commodore CDTV units, which are easy to acquire through authorized dealers and are now being sold at drastically reduced prices, double well as CD-ROM players. Connect the CDTV to your Amiga via each machine's parallel port and use Software Distillery's freely distributable Parnet networking software and your Amiga to access the data on CD-ROMs in the CDTV device. (And, when you're done computing, if the CDTV is connected to your sound system, you can slip in a music CD and sit back and enjoy your favorite tunes!) ■

Got a question on Amiga computing that you just can't seem to unlock? Write to Tim Walsh at Help Key, ***AmigaWorld****, 80 Elm St., Peterborough, NH 03458.*

DON'T SLOW DOWN YOUR AMIGA 1200 WITH 16-bit WIDE "CREDIT CARD" RAM! GET TRUE 32-bit WIDE, ZERO WAIT-STATE FASTRAM ACCESS!

PURCHASE THE MICROBOTICS MBX 1200z CARD FOR THE AMIGA 1200

AMIGA

A4000 Computer	2599
A2000 Computer	699
A1200 Computer	599
A600 Computer	329
1960 Multisync Monitor	499
2024 Monochrome Mon.	199
A590 20MB HD System	239
A570 CD-ROM	415
CDTV	574
1084S Monitor	279
1084 Monitor	199
A2386 25Mz Bridgecard	499
A2320 Flicker Fixer	134
A2286 AT Bridgeboard	279
A2630 Accelerator	375
A520 Video Adapter	29
A2088 XT Bridgecard	99
A2090A Hard Drive Controller w/45MB HD	149
A2091 HD Controller	69
HD Floppy Drive 1.76MB	99.95
External HD Drive	125

CBM CHIPS

Kickstart 2.1 Upgrade Kit	85
Kickstart 1.3	26
1MB Agnus (8372A)	39.95
2MB Agnus (8372B)	79.95
Super Denise (8373)	29.95
Paula (8364)	22
CIA (8520)	9.95
Gary (5719)	14.95
2620/2630 Eprom Kit	35

IVS

Grand Slam	229
Grand Slam 500	287
Trumpcard Pro	139
Trumpcard 500 Pro	225
Trumpcard 500 Plus	Call
Trumpcard 500 AT	164
Meta4 Memory Card	85
Printerface Auxiliary Printer Port	55
Sourcer Switching Power Supply	99

GVP 68030/ 68882-25Mz 1MB/60ns RAM w/SCSI Controller

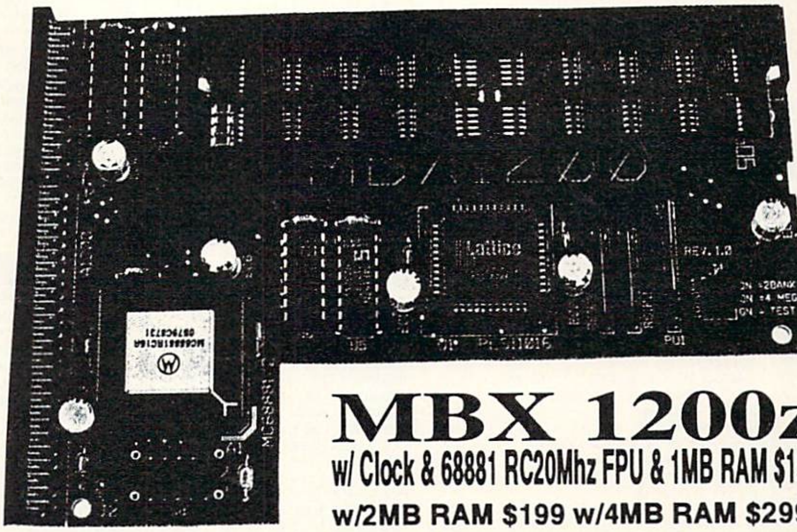
$475

CALL OUR BULLETIN BOARD

THE WORLDS LARGEST AMIGA RUN BBS!

10 HST D/S LINES
2 GIGABYTES OF STORAGE

(302) 836-6175



MBX 1200z

w/ Clock & 68881 RC20Mhz FPU & 1MB RAM $159

w/2MB RAM $199 w/4MB RAM $299

Call for other custom configurations

GVP

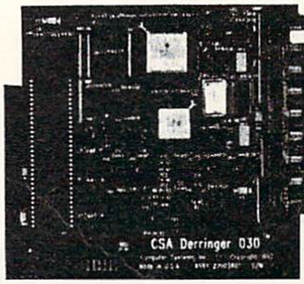
A500-HD8+0MB/40	349
A500-HD8+0MB/80	425
A500-HD8+0MB/120	479
A500-HD8+0MB/213	599
A530-HD8+1/120	759
A530-HD8+1/245	Call
A2000-HC8+0MB	149
SIMM32/1MB/60ns	59.95
SIMM32/4MB/60ns	169.95
1MB SIMM GForce A3000	Call
G-Lock Genlock	399
A3000-Impact Vision 24	1675
A2000-IV24 Adapter	39
VIU-CT	499
A1230 Turbo+	LOWEST!
A1200 SCSI / RAM+	LOWEST!

GForce Accelerators w/ 68030,68882, 60ns RAM, SCSI Controller, RAM Card in One

40Mhz/4MB	695
50Mhz/4MB	1195
68040 33Mhz A2000/4MB	1445
68040 28Mhz A3000/2MB (40ns RAM)	975
PC286 Module 16Mhz	109
Tahiti-II 1GB (35ms)	3300
Tahiti-II 1GB Cartridge	299
Syquest 44MB Removable	275
44MB Cartridge	65
Syquest 88MB Removable	385
88MB Cartridge	119
Impact XC Ext. case	250
FaaastROM Kit	35
Cinemorph Software	109
Phonepak VFX	379
DSS8 Sound Sampler	74
I/O Extender	195
Image F/X	239

CSA DERRINGER

Running at 25Mhz w/ MMU
4MB 32bit RAM Exp. to 32MB,
w/ 68881 $499
w/ 68882 add $75
w/ 68882-50Mhz add $150
8MB version add $199.
NOW ONLY $399 w/ 1MB 68881



ASK ABOUT OUR ACCELERATOR, HARDDRIVE AND MEMORY UPGRADES

VECTOR

BY INTERACTIVE VIDEO SYSTEMS

THIRD GENERATION 68030 PROCESSOR ACCELERATOR FOR THE AMIGA 2000

TESTED & CLOCKED AT 25 MHZ - W/68030 & 68882, EXPANDABLE TO 32MB RAM W/ SCSI CONTROLLER. FEATURES PROPLEX, SCSI SHARE™ NETWORKING, RAM & SCSI USABLE IN 68000 MODE.

Call!

HARD DRIVES

Quantum - Conner
Maxtor - Fujitsu
Western Digital
2.5" and 3.5"

AT UNBELIEVABLE PRICES!

Maxtor 213MB 15ms LPS 64K Cache **$339**

Quantum 245MB 11ms LPS 256K Cache **$399**

MEMORY CHIPS

IVS 1MB SIMMS	29.95
1x8 80-60ns SIMMS	Call
4x8 80-60ns SIMMS	Call
1x4 80-60ns Static ZIP	Call
1x4 80-60ns Page ZIP	Call
1x4 80-60ns Page DIP	Call
1x1 100-70ns DIP	Call
256X4 80-60ns DIP	Call
256X4 80-60ns ZIP	Call
A4000 SIMMS	Call

LASER PRINTER MEMORY

HP II, IID, IIP, III, IIID, IIP AND ALL PLUS SERIES

Board with 2MB	89.95
Board with 4MB	149.95
Deskjet 256K Upgrade	65.95
2 Boards (for 500 Series)	130
HP 4 (4 Meg)	149
HP 4 (8 Meg)	295

A600/1200 Accesories

PCMCIA 2 and 4MB	Call
Baseboard	Call

DKB

Insider II w/0K	159
2632 w/4Megabytes	399
MegAChip 2000/500 w/2MB Agnus	289
Multi-Start 2 Rev 6A	53
KwikStart II for A1000	69
SecurKey Security Board	99
BattDisk battery backed static RAM disk	199

US ROBOTICS

16.8K Courier HST with fax	595
16.8K Courier HST Dual Standard with fax	925
Courier v.32bis	449

ACCESORIES/MISC.

Kick Back ROM Switcher	35
PowerPlayers Joystick	7.49
CSA Rocket Launcher	**499**
SupraTurbo 28Mhz	**Call**
68030 50Mhz CPU	**179.95**
68882 50Mhz Math Co	**135.95**
Safeskin Protectors	Call
Xtractor+ Chip Puller	9.95
Slingshot single A2000 slot for the A500	39.95
Kool-It Cooling kit A500	39.95
Qwika Switcha 4 socketed ROM selector	39.95

DeVine COMPUTER SALES

18 Wellington Drive
Newark, DE. 19702
(800) 578-7617 ORDERS ONLY
(302) 836-4138 Info 10AM-6PM
(302) 836-8829 Fax 24 HOURS

Visa / Master Card Accepted. Prices And Specifications Are Subject To Change Without Notice 15% Restocking Fee On All Non-Defective Returned Merchandise. Call For Approval RMA# Before Returning Merchandise. Shipping And Handling For Chips Is $4 COD Fee $5 Personal Checks Require 10 Days To Clear. Call For Actual Shipping Prices On All Other Items. **If You Don't See It Here, Call Us!**

Circle 189 on Reader Service card.

TENEX
Computer Express
1-800-PROMPT-1

GVP AMIGA UPGRADES

GVP A500 IMPACT SERIES II HARD DRIVES		
A500-HD8+0/40 II	C14076	349.00
A500-HD8+0/80 II	C14085	419.00
A500-HD8+0MB/120 II	C10039	479.00
A500-HD8+0MB/213 II	C13940	629.00
GVP A530 TURBO-ACCELERATOR & DRIVE		
A530 Combo 40+1/80 II	C15072	719.00
A530 with 120 MB Hard Drive	C12376	759.00
A530 with 213 MB Hard Drive	C13950	899.00
GVP A2000 IMPACT SERIES II HARD CARDS		
A2000 Barecard	93667	149.99
A2000-HC8+0MB/120 II	C10059	399.00
A2000-HC8+0MB/213 II	C13964	549.00
GVP IMPACT SERIES II HARD DRIVE/ G-FORCE 030—25MHz 68030 ACCELERATORS		
Combo030-25/25/1/0	99133	529.00
Combo030-25/25/1/120	99152	829.00
Combo030-25/25/1/213	C13986	949.00
G-FORCE 030—40MHz 68030 ACCELERATORS		
Combo030-40/40/4/0	99175	699.00
Combo030-40/40/4/120	97545	999.00
Combo030-40/40/4/213	C13992	1199.00
Combo030-40/40/4/540	C15084	1999.00
G-FORCE 030—50MHz 68030 ACCELERATORS		
Combo030-50/50/4/0	97568	1199.00
Combo030-50/50/4/120	97589	1499.00
Combo030-50/50/4/213	C14010	1699.00
Combo030-50/50/4/540	C15092	2299.00
G-FORCE 040—28MHz 68040 ACCELERATORS		
G-Force3000-040/28/2	99124	1599.00
G-FORCE 040—33MHz 68040 ACCELERATORS		
Combo040-33/33/4/120	C14009	1649.00
Combo040-33/33/4/213	C13843	1749.00
Combo040-33/33/4/540	C15104	2399.00
G-FORCE ACCELERATOR RAM UPGRADES		
1MByte, 60ns SIMM	C10076	69.99
4MByte, 60ns SIMM	C10089	199.00
1MByte, 40ns SIMM	C10092	219.95
GVP PHONE PAK	C10989	349.00
PC/286 MODULE for GVP	97713	109.99
I/O EXTENDER	C15476	199.00
A1230 TURBO PLUS	C15468	CALL
A1200 SCSI RAM PLUS	C15457	459.99

AMIGA SYSTEM UPGRADES

AMIGA 500 CD ROM DRIVE	C12825	399.00
TENEX INTERNAL A500 HARD DRIVES		
TENEX 105MByte Kit	95724	CALL
3.5" EXTERNAL FLOPPY DRIVE.		
3.5"External Drive	89276	84.99
1MBYTE x 8 x 80 SIMMs	93693	44.95
BIGFOOT POWER SUPPLY	92898	94.95
SUPRADRIVE 500XP HARD DRIVES		
52MByte with 1MB	96445	465.00
52MByte with 2MB	96455	545.00
120MByte with 2MB	96643	665.00
240MByte with 2MB	96653	909.00
SUPRADRIVE 500XP UPGRADES.		
512KByte kit	97255	23.95
2MByte kit	97263	99.95
TRIFECTA 500 LX	C13566	CALL
TRIFECTA 2000 LX	C13578	CALL
WORDSYNC SCSI INTERFACE		
WordSync interface	88673	99.95
DKB 2632 32 BIT MEM EXP.	C13812	459.00
HARD DRIVE INTERFACE FOR A1000	C13533	174.99
12 A'CLOCK for A1200	C15509	27.99

MODEMS & FAXES

GVP PHONE PAK	C10989	399.00
SUPRAMODEM 2400	96667	69.99
Modem Serial Cable	A42447	12.95
SUPRA FAX/MODEM EXTERNAL		
FAX/Modem, v.32	97149	239.95
FAX/Modem, v.32bis	97154	299.99
PLATINUM ONLINE	88486	24.99

AMIGA INPUT DEVICES

BEETLE MOUSE W/PAD	94074	34.95
BOING! MOUSE W/PAD	94089	79.99
ERGO JOYSTICK from WICO	76253	17.95
FLEXIDRAW 184-A LIGHT PEN	82037	89.95
IBM JOYSTICK INTERFACE	C15532	13.99
IBM BUS MOUSE INTERFACE	C15586	13.99
ROCTEC AMIGA MOUSE	95252	24.99
THE SWIFTY MOUSE	97200	26.99
THE WIZ TABLET	96489	239.99
TRIPLETRACK TRACKBALL	96994	49.95
ZOOMER/YOKE JOYSTICK	88081	44.95
MIGRAPH HAND SCANNER	C14189	259.99
MIGRAPH OCR SOFTWARE	C13626	259.99
400 DPI HAND SCANNER	C12638	149.99
EPSON ES600 SCANNER	C15480	849.00

ADDPRO EPSON ES DRIVER (required for the ES600 Scanner)	C15368	119.99

MEMORY & ACCELERATORS

A601 EXPANSION W/ CLOCK	C13508	84.99
A601 EXPANSION W/ 1MB	C13510	69.99
A600/600HD CARD W/ 2MB	C12288	199.99
A600/600HD CARD W/ 4MB	C12294	329.99
FASTRAM IC 2MB for A600 and A1200	C15519	149.99
FASTRAM IC 4MB for A600 and A1200	C15527	229.99
KWIKSTART II for A1000	C15423	48.99
MEGA MIDGET RACER	C10998	399.95
SUPRARAM 500 RX with 1MByte		
500 RX w/1MByte	94016	124.95
1MByte Upgrade Kit	97312	64.95
SUPRARAM 500 RX with 2MByte		
500 RX w/2MByte	94029	169.99
2MByte Upgrade Kit	97278	99.95
SUPRARAM 2000		
with 0MByte	89048	109.95
with 2MByte	88683	165.95
with 4MByte	88691	224.95
VECTOR 68030 for the A2000	C12606	699.99
EXPANSION BOARDS FOR THE A1200		
No FPU with Clock	C15195	139.99
14 MHz with Clock	C15203	159.99
25 MHz with Clock	C15227	229.99
50 MHz with Clock	C15234	339.99

COMMODORE PRODUCTS

A2010 3.5 INT. FLOPPY DRIVE	91888	109.95
A3010 3.5 INT. FLOPPY DRIVE	94173	99.95
A500 REPLACEMENT INT. DRIVE	C12554	89.99
FLEXIFONT	37724	24.95
GRAPHICS INTEGRATOR	C10216	19.95
GALLERIA GROUP I	C15389	19.99
GALLERIA GROUP II	C15392	19.99

AMIGA ENHANCEMENTS

AMIGADOS 2.1		
A500/A2000	96335	89.95
A3000	97707	34.95
AMIGADOS 2.1 UPGRADE	C13858	44.99
FAT AGNUS, 2MBYTE		
Fat Agnus 8372B, 2MByte	98564	79.95
Fat Agnus 8372B/MegAChip 2000	C10013	289.00
FAT AGNUS, 1MBYTE	98553	50.95
SUPER DENISE 8373	98572	44.95
CHIP PULLER	C10249	14.95
THE SWITCH MAN	C15054	39.99
KOOL-IT	C15570	37.99

EMULATORS

A-MAX II PLUS	C12654	339.99
POWER PC BOARD	96620	269.95
PC/286 MODULE for GVP	97713	149.00
ATonce+ PC/AT EMULATOR	A70756	179.99

DATA STORAGE

SYQUEST DRIVES FOR AMIGA & MAC		
44MByte External Drive	A63425	429.95
88MByte External Drive	A67222	599.95
44MByte Cartridge	A60583	79.95
88MByte Cartridge	A62872	109.95
20MBYTE FLOPTICAL DISK DRIVE		
Internal Floptical Drive	98668	499.99
External Floptical Drive	98659	599.99
20MByte Floptical Diskette	98160	19.99
TENEX SCSI TAPE BACKUP	A84109	699.00

AMIGA VIDEO HARDWARE

AMIGA 520 VIDEO ADAPTER	79283	34.95
CHROMAKEY +	C12786	339.99
DCTV	91689	299.00
DIGITAL EDIT MASTER	C13427	2299.00
DIGI-VIEW MEDIASTATION	97387	151.99
FIRECRACKER 24	97281	819.95
GENLOCK from GVP	C13821	399.00
IMPACT VISION 24		
Impact Vision 24	95867	1699.00
Optional adapter for A200	95877	49.99
KITCHEN SYNC	94366	1595.00
OPALVISION	C11916	899.99
PERSONAL TBC III	C13009	CALL
ROCGEN PLUS *NEW PRICE!*	94183	249.99
ROCKEY	C11693	349.00
Spectrum FRAME GRABBER	C11448	449.00
VIDEO TOASTER 2.0		
Video Toaster	96598	$CALL
VIVID 24	C13436	2699.00

PRINTERS

PANASONIC		
KX-P1180I	A68584	159.95
KX-P2180I	A68846	179.95
KX-P1123	A57108	199.95
KX-P2123	A72449	239.99
KX-P1124I	A57112	289.95
KX-P1624	87444	349.95
KX-P4410 Laser	A71385	649.95
STAR		
NX-1001	90895	136.99
NX-2420 Rainbow	A51047	284.95
NX-1040 Rainbow	C12275	164.99

GRAPHICS & PUBLISHING SOFTWARE



PROFESSIONAL PAGE 4.0	98154	169.99
PROFESSIONAL DRAW 4.0	C12064	119.99
Page4.0/Draw 4.0 Bundle	C12072	239.00
ART DEPT. PROFESSIONAL	92135	147.99
Conversion Kit	92149	52.95
ART EXPRESSIONS	C14843	159.99
BRILLIANCE	C14883	139.99
BUSINESS CARD MAKER	96039	39.95
COMIC SETTER	81815	41.95
DESIGN WORKS	94439	72.99
THE DIRECTOR V. 2.0	90147	75.99
GOLD DISK TYPE		
Designer Pack	90067	34.95
Decorative Pack	90072	39.95
IMAGINE 2.0	90166	189.99
OUTLINE FONTS	94390	129.95
PAGESTREAM 2.2	C10679	169.99
PIXEL 3D PROFESSIONAL	C14870	139.99
SAXON PUBLISHER 1.1	94069	169.99
SPECTRA COLOR	94607	64.95
VIRTUAL REALITY 2.0	C15403	57.99
VISTA PRO	94118	54.99
ZUMA FONT PACK 1-2-3	97513	59.95

AMIGA VIDEO SOFTWARE

BREAD & BUTTER FONTS	95944	57.99
CALIGARI 24	C13760	249.99
CALIGARI 2	88289	129.99
CINNAMON TOAST FONTS	95951	57.99
CINEMORPH	C12922	84.95
DELUXE PAINT IV 4.1	94997	107.95
DELUXE VIDEO® III	79452	99.95
IMAGE F/X	C10973	199.99
MORPH PLUS	C13149	147.99
PLAYMATION	C13779	329.99
PROVIDEO CG II	C11391	111.99
PRO VIDEO GOLD	88186	119.99
PRO VIDEO POST	93838	169.99
VIDEO TOASTER SOFTWARE UPGRADE 2.0	C10139	339.00
VIDEO DIRECTOR	96170	133.99

CAD SOFTWARE

GFX CAD (FullVersion)	C11639	264.99
GFX CAD (Upgrade)	C11642	129.99

AMIGA MUSIC AND SOUND



MIRACLE PIANO TEACHING SYSTEM.

A revolutionary learning method that conquers traditional teaching hurdles by making studying fun and productive. Features include an electronic piano keyboard capable of synthesizing over 100 digitized instruments, 25-to 25-pin cable, utility software, an AC adapter, earphones, and output jacks so you can use it with your stereo. Use the synthesizer as a stand-alone instrument without the computer platform. (Note: A1000 needs a one-to-one gender changer).

Miracle Piano 99026 319.99

AMAS V. 2.0		
Includes MIDI interface	86334	89.99
BOOM BOX	C13443	36.99
POWERED STEREO SPEAKERS	97290	34.95
DIGITAL SOUND STUDIO	97302	74.99
DELUXE MUSIC II	C15437	84.99
MIDI INTERFACE	C10669	34.99
MIRACLE PIANO	99026	319.99
PERFECT SOUND 3.0	86370	69.95
TIGER CUB	89721	74.95
VIDEO MUSIC BOX	C14865	69.99

AMIGA UTILITIES

AMI-BACK v2.0	94057	44.95
ASSEMPRO	83926	64.95
DIRECTORY OPUS	C14894	62.99
DISKMASTER II	95936	39.95
DOS-2-DOS	98403	31.95
FAT TRACKS	C15377	44.99
GIGAMEM	C13798	99.99
HYPERCACHE PRO	C15625	34.99
KICKBACK	C11420	39.99
MAVERICK, V4	89601	32.95
MICROFICHE FILER +	94095	119.95
QUARTERBACK	C10964	44.99
RAWCOPY	C14857	44.95
SAS/C COMPILER	C12252	242.99
VIRTUAL REALITY Studio 2.0	96193	57.99

AMIGA PRODUCTIVITY

DISTANT SUNS 4.1	94599	49.95
DYNACADD V. 2	C12714	649.99
EASY AMOS	C14913	34.99
FINAL COPY II	C12807	89.99
GOLD DISK OFFICE	90052	119.95
HOTLINKSV.1.1	C13526	46.99
MAXIPLAN 4	C11379	124.99
MINI OFFICE	C14932	69.99
PHASAR	C11079	49.99
PROFESSIONAL CALC	96151	174.99
PROPER GRAMMAR	94440	51.99
PROWRITE™ 3.3	88222	54.99
SUPERBASE PERSONAL II	C14203	79.99
SUPERBASE 4 PRO	C14194	179.99

PRESENTATION SOFTWARE

SCALA MULTIMEDIA	C14301	CALL
SCALA 500—HOME TITLER	97001	119.95
THE ANIMATION STUDIO	90126	42.99
AMIGAVISION PRO	C12837	319.00
ESSENCE	C14904	49.99

ENTERTAINMENT SOFTWARE TOP ALL-STAR GAMES

AWESOME	91098	27.95
LEMMINGS	92226	27.95
LEMMINGS II THE TRIBES	C15332	34.99
OH NO! MORE LEMMINGS	96818	29.99
Add-on disk-more levels!	95666	22.99
POWERMONGER	90767	31.95

ENTERTAINMENT SOFTWARE SPORTS

4-D BOXING	98954	31.95
CARL LEWIS	C11065	29.99
JOHN MADDEN FOOTBALL	98939	31.95
LINKS	97799	29.95
Bountiful Golf Course	C11204	16.99
Firestone Country Club	97808	16.95
MICROLEAGUE BASEBALL	98099	24.95
MANSELL'S WLD. CHAMP.	C15029	39.99
MANSELL'S AGA VERSION (FOR A1200 OR A4000)	C14118	39.99
RED ZONE	C11082	29.99
TONY LARUSSA ULT. BSBALL.	93873	9.99
WORLD CIRCUIT	98058	36.95

ENTERTAINMENT SOFTWARE ADVENTURE

AD&D CHAMPIONS OF KRYNN: Dragonlance Fantasy Role-Playing V.1	88879	16.99
AD&D: Dark Queen of Krynn	C10751	32.95
AD&D: Death Nights of Krynn	94156	14.99
AD&D: Gwy. to the Savage Front.	97787	16.99
AD&D: Pools of Darkness	95309	44.95
AD&D: Treas. of Savage Front.	C11109	17.99
AGONY	98968	29.99
AMERICAN GLADIATORS	C10780	24.95
AMNIOS	94659	32.95
ARMOUR-GEDDON	98979	29.99
AQUAVENTURA	C11055	29.99
BATTLE SQUADRON	C13396	9.99
BEAST II: SHADOW DEEPENS	90435	34.95
BILL'S TOMATO GAME	C14057	32.99
BEAST III	C12351	33.99
BLACK CRYPT	96283	31.95
BUZ ALDRIN	C13213	39.99
CARTHAGE	98985	29.95
CASTLES	94877	34.95
CLIK CLAK	C14131	29.99
COMBAT AIR PATROL	C13150	32.99
CONQUEST OF JAPAN	C13490	34.99
CREEPERS	C13165	29.99
CRIME DOES NOT PAY	C12500	32.99
CRUISE FOR A CORPSE	C11124	34.99
CYBERBLAST	C15442	9.99
DARKSEED	C13787	39.99
DEMONIAK	C12512	30.99
DESERT STRIKE	C13304	31.99
DISCOVERY COLUMBUS	C13483	34.99
DRAGON'S LAIR III	C13931	39.99
DUNGEON MASTER/CHAOS STRIKES BACK	C12772	29.99
ELVIRA II: JAWS of CERBERUS	95847	26.99
EYE OF THE BEHOLDER II	96309	39.95

GODS	C11159	28.99
GUY SPY	95427	29.99
HEIMDALL	C12387	19.99
HOI	C13259	24.99
LEANDER	95698	29.99
LEGEND OF KYRANDIA	C12401	34.99
LORDS OF TIME	C13262	29.99
LOST TREASURES OF INFOCOM	C11340	44.99
MEGAFORTRESS: FLIGHT OF THE OLD DOG	95096	37.95
MIGHT & MAGIC III	96297	34.99
MURDERS IN SPACE	C12475	32.99
NAM	C12530	32.99
OMAR SHERIF ON BRIDGE	C13229	36.99
PALADIN II	C13474	42.99
THE PERFECT GENERAL	98779	34.99
THE PLAGUE	C13410	7.99
POPULOUS II	96271	38.95
POPULOUS II CHALLENGE	C12340	22.99
POWERMONGER: WWI	95062	19.95
RAILROAD TYCOON	C10806	34.95
ROAD RASH	C13289	31.99
ROBOCOP 3-D	C10739	34.95
SHADOWLANDS	C12545	29.99
SILENT SERVICE II	98792	37.95
SWORD OF SODAN	C13402	9.99
TENGEN ARCADE HITS	C11147	26.99
THIRD REICH	C10795	29.95
TITUS THE FOX	C13173	34.99
TURRICAN	C13384	9.99
UNREAL	C10292	7.95
VIKINGS LOW PRICE	C10700	29.99
WARLORDS	C13908	34.99
WIZARDRY: Crusaders of the Dark Savant	97823	46.95
WOLF PACK	C10106	14.95
ZOOL (FOR A1200 and A4000)	C15118	37.99

ENTERTAINMENT SOFTWARE FAVORITE CHARACTERS



THE AMAZING SPIDER-MAN	91324	19.95
ARACHNOPHOBIA	93899	9.99
DICK TRACY	93907	9.99
DUCKTALES: Quest for Gold	91491	9.99
HILL STREET BLUES	C10717	24.95
INDY JONE FATE ATLANTIS	C15492	39.99
LAST NINJA	95390	22.95
STAR TREK: 25TH ANNIVERSARY	C13237	34.99
T.M.N.T. ARCADE	95604	24.99

ENTERTAINMENT SOFTWARE STRATEGY GAMES

AIR SUPPORT	C11042	29.99
BATTLE CHESS	87568	29.95
BLACKJACK ACADEMY	83027	16.95
CASTLES II	C13243	34.99
DUNE	C12392	29.99
LIGHT CORRIDOR	C12482	32.99
MONOPOLY	84552	29.95
SIMCITY	82879	29.99
SIMEARTH	C11857	39.99
TETRIS	83835	26.95

ENTERTAINMENT SOFTWARE SIMULATION GAMES



AV-8B HARRIER ASSAULT	C15411	29.99
A-TRAIN	C13362	39.99
ASHES OF EMPIRE	C13467	47.99
CIVILIZATION	C11092	59.99
CRAZY CARS 3	C12463	32.99
EAGLES RIDER	C12522	32.99
MYSTICAL	C12495	32.99
SHUTTLE	96138	32.99
SCENERY ANIMATOR 2.0	C11461	54.99
SUPER HEROS	C15343	29.99
TRACON II	92678	39.99

EDUCATIONAL SOFTWARE

AMY'S FUN-2-3	C11581	29.99
BRIDGE 6.0	96218	24.95
DINOSAURS ARE FOREVER	83134	14.95
PHUNNYPHONEMES	C12668	19.99
SCRABBLE	84567	17.95
STUDYWARE FOR THE SAT	C10952	34.95
WHERE IN THE WORLD IS CARMEN SANDIEGO?	85229	29.99
WHERE IN EUROPE?	89179	29.99
WHERE IN TIME?	91005	29.99
WHERE IN THE USA?	86677	29.99

Order Toll-Free Nationwide

1-800-PROMPT-1

AMIGA 600

$299^99!

Amiga 600 Bonus Pack

Includes

Amiga 600 Computer
Great Software Titles

C12846 ....$299.99



Amiga 600 HD Bonus Pack

Includes

Amiga 600HD Computer
with 40 MByte Hard Drive
Great Software Titles

C12855 ....$459.99

Sale!

Amiga 600 Graphics Pack

Includes

Amiga 600 Computer
Amiga 1084S Color Monitor
with Stereo Sound
Great Software Titles

K12987 ....$549.99

Amiga 600 HD Graphics Pack

Includes

Amiga 600HD Computer
with 40 MByte Hard Drive
Amiga 1084S Color Monitor
with Stereo Sound
Great Software Titles

K12995 ....$699.99

AMIGA 1200

New!



Includes

- Hi Resolution AGA Chip Set (Same as Amiga 4000)
- Fast 14.32 MHz Processor
- 2MBytes of Chip RAM
- 256.000 Simultaneous Colors
- IDE Hard Drive Interface
- Multiple Display Options

Call For Lowest Pricing

A1200 with Hard Drive

Call For Lowest Pricing

1960 Color Monitor

Call For Lowest Pricing

HARD DRIVES

We carry a complete selection of SCSI and IDE Hard Drives from Quantum and other fine manufacturers. Call for latest models and prices!

Seagate 42MByte IDE 3.5" Hard Drive

Only $149^99



3.5" HARD DRIVES FOR THE A500, A2000, A3000, & A4000

IDE Drives

Quantum 42 MByte Hard Drive	C11762	154.99
Quantum 85 MByte Hard Drive	C11779	189.99
Quantum 127 MByte Hard Drive	C11780	249.99
Quantum 170 MByte Hard Drive	C11790	279.99

SCSI Drives

Quantum 42 MByte Hard Drive	C11806	169.99
Quantum 85 MByte Hard Drive	C11815	219.99
Quantum 127 MByte Hard Drive	C11922	279.99
Quantum 170 MByte Hard Drive	C11933	314.99

INTERNAL HARD DRIVES FOR THE A500, A600, AND A1200

40 MByte Hard Drive	C15329	169.99
64 MByte Hard Drive	A85482	CALL
85 MByte Hard Drive	A88366	229.99
128MByte Hard Drive	A88382	339.99
160MByte Hard Drive	C15351	469.99
Required Cable for A600, 1200	A85461	8.99
Required Kit for A500	95748	134.50

Circle 22 on Reader Service card.

DATAFLYER *Express*



The DataFlyer Express upgrades the Amiga 500 with a hard drive and up to 8 MBytes of memory. Just add any 3.5 inch low profile hard drive and SIMM memory modules. The controller comes in either SCSI, IDE or a SCSI/IDE combination hard drive controller. Includes all software, hardware and cables, auto-boosting, auto install, DB25 SCSI pass thru (SCSI only), and drive and power LED display. Compatible with Floptical, CD-ROM, Amax II (SCSI), Syquest (SCSI), Power PC and KCS AT emulator (SCSI/IDE), and Baseboard. (Note: Hard drive not included).

Data Flyer Express SCSI	C13116	$169.99
Data Flyer Express IDE	C13120	$159.99
Data Flyer Express SCSI/IDE	C13130	$199.99

Guaranteed LOWEST Prices

Order Toll-Free Nationwide

1-800-PROMPT-1

(1-800-776-6781)

Mon.-Fri. 8:00am - 8:00pm
Sat. 9:00am - 2:00pm (EST)

VISA MasterCard DISCOVER

Shipping, Handling, Insurance

Order Amount	Charge
less than $19.99	$5.00
$20.00-$39.99	$6.50
$40.00-$74.99	$7.50
$75.00-$99.99	$8.50
$100.00-$149.99	$10.50
$150.00-$299.99	$11.75
$300 & Over	2.8% of Order

We Carry a Complete Line of Amiga Hardware!

A2000! A3000! More!

Call for the Lowest Prices in the U.S.!

DevWare

SERVING THE AMIGA COMMUNITY SINCE 1985

Public Domain Library

$3.45* ea. 30+ Disks

$3.95* ea. 20-29 Disks

$4.45 ea. 11-19 Disks

$5.95 ea. 1-10 Disks

SPECIAL Order 15 disks and receive a complimentary copy of Anti-Virus (a $20 value) ***AND*** pick any 3 disks of your choice!

We have been the official Public Domain Library of all the best Amiga magazines. Find out why these magazines choose us! The first two letters on each disk indicate the orientation of the disk; WB# general interest - most programs can be run from the workbench, FD# games and entertainment, VO# are video related programs/utilities and DD# advanced--requires thorough knowledge of AmigaDOS/CLI. *Thanks to our extensive arsenal of anti-virus software, ALL of our software is guaranteed virus free!*

GUARANTEE - We believe so strongly in our product that we offer a full *lifetime*, complete satisfaction guarantee. No questions asked.

BEST SELLER!

DD79abcd: Amiga "C" Tutorial - This is the most comprehensive C language--*Amiga oriented*--set of tutorials available. Includes full working examples, source code and an incredible set of lessons. Included are full discussions and examples for Amiga programming. 4 disk set, counts as 3.

NEW DISKS

VO11: Imagine Enhancer - T3D converts Imagine objects to OFF, NFF, VORT, Rayshade, MIF, DXF and POV formats.
VO10: Imagine Enhancer- ICoons and ISL supplement the object and scene editors.
FD86: UChess: The strongest playing Chess program available for the Amiga period. Req. 68030+, Workbench2+, 4MB RAM. Supports AGA.
FD84: Games! Deluxe PacMan is better than the original--20+ mazes, special "power-ups" with *oustanding* graphics. ThinkAmania is the classic game of concentration--with *beautifully* drawn HiRes images.
WB127: Super Virus Killer - From Safe Hex Int'l, who catalogs and kills Amiga Viruses *worldwide*--a complete virus system that knows all Amiga viruses...updated often. Req. WB 2+
WB126: EdPlayer - music MOD player that looks, acts and plays like your CD player...AmigaWorld's #1 MOD utility. Plus MOD songs.
WB124: Flags of the World - Two modes: click and learn or a game to test your knowledge. Great graphics--fantastic learning tool. Has current Russia & Yugoslavia republics. Req. Workbench 2.0+ & 1MB RAM.
WB123AB: Flags of the World - same as above, but for 1.3. Req. 1MB.
WB122: System Optimizer - KCommodity enhances your system, gives memory meters, mouse/keyboard enhancements, online timers plus *many* others...too numerous to list! REorg will optimize hard and floppy-disks for a big speed increase. HDMem will allow you to use up to 2 megs of hard-drive space for virtual memory! (Req. 68020+ w/MMU) All programs require 2.0+.
WB121: ProPage3 Enhancer - This disk contains over 40 "Genies" for use with ProPage 3.0, including useful ones like Make Pie Chart and Resize Text to fit Box to name a few. Also includes structured & bitmap clipart for unique borders...a *must have* for all PPage 3 users.
WB120: Grinder - a complete graphics conversion package that supports GIF's, JPeg, Neochrome, Degas, PCX, Targa, TIFF, HAM-E and IFF format pictures.
DD91: ParBench - Allows you to easily connect/network two Amigas/CDTVs together and share storage devices. Req's WB2+ and custom cable (docs to make cable included--easy).
DD90: Advanced Utilities - CompressDisk doubles the capacity of your hard-drive on the fly with compression!!! Also contains: disk optimizer, SCSI mount utility, Keymap editors, Enforcer, Undeleter & more. Most programs require 2.0+.

FUN DISKS

FD6: GAMES! - This disk is chock full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.
FD7: Pacman - This disk contains several pacman type games including; PacMan87, MazeMan and Zonix.
FD10: HackLite - A dungeon adventure game. Considered a must-have classic. This is the 2nd release of this game. Great graphic interface. Play time several weeks!
FD11: Las Vegas and Card Games - Las Vegas Craps - The best Las Vegas Craps simulation every written for any computer. Contains extensive HELP features, Also Thirty-One,VideoPoker and more.

DD83: IBM - Not one, but *TWO* IBM emulators that will allow the running of MS-DOS software *with* Amiga programs!!! Comes complete with programs to turn your Amiga floppy drives into 720K IBM compatible drives.

FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).
FD13: Board Games - contains Monopoly, Dominoes, Paranoids, and others.
FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arkanoid/breakout type game, Trix - a Qix type clone.
FD17: Educational Games - This disk includes several games for youngsters including geography, math, science, and word games, also includes Wheel of Fortune.
FD20: Tactical Games - MechForce; A game that simulates combat between two or more giant robots. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.
FD27: Arcade Games - This disk is loaded with some great games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as frogger, and SBreakout the original breakout with more.
FD29: Shoot'em up's - WWII - you're the pilot of a WWII plane flying through enemy territory, you've just been spotted, good luck on you mission, SpyKiller - try and penetrate enemy lines with this game, and Retaliator - another great game.
FD31: Games! - Air Traffic Control - a good ATC simulation, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrinth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.

WB105AB: Workbench 2+ Extras #2

This set contains the programs that should have been included with WB2+. These powerful utilities take full advantage of the many new capabilities that are available in Workbench 2+. Includes: Tool Manager - a wonderful utility to add programs to your TOOL menu, Virus Protection - Degrader, Icon - Enhances Workbench's "Show All" to display over 40 distinct icons for different types of files. Bitmap Font Editor, Screen Blankers - ala fractals and spliners and swarming bees! Requester Enhancers and CPUBlit. Two disk set, counts as two.

FD32: Flight Simulator - An instrument flight simulator for a DC10.
FD33: Arcade Games - Ffreddy a Mario Brothers type of game, Gerbils a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and Wetroids a wonderful version of asteroids with a hilarious twist.
FD35: Omega (v 1.3) - An outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better that all previous versions. Play time: weeks.
FD38: Games - Cribbage Master - A great cribbage game and tutor, Spades - a well done card came, ChineseCheckers - A computer version of this classic, Puzz - a slide piece puzzle game and construction set.
FD39A&B: Star Trek, The New Generation - This is a completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Excellent!!! Counts as two disks. Requires 512k
FD50: Submarine Game - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.
FD57: Arcade Games - Includes 2 truly commercial quality games. MegaBall, an Arkanoid-ish game, features 5 musical scores and addicting gameplay. Gravity Attack is a psychadelic trip through several different worlds—each different.
FD59: Game Potpourri - Xenon III is an almost exact clone of the commercial game of the same name...a great shootemup. Crossword will take lists of words & automatically generate word-search puzzles for any Epson compatible printer.
FD60: Games - In Nebula, race over a 3d world to destroy enemy installations. Interferon; a *great* Dr. Mario clone. Enigma; is it a game or puzzle?
FD61: Games - Solitaire; great graphics, plays two versions. Klide; an interesting piece of eye candy. Extreme Violence; 2 player kill or be killed game. YATC; A Tetris clone with Artifical Intelligence. Genesis; create realistic 3d fractal worlds.
FD62: PomPom Gunner. An extremely smooth and well done World War II gunner simulation. Requires 1 megabyte of memory.
FD64: Games - Wizzy's Quest - a "great" 50 level game with great graphics, Cubus - a 3-dimensional Tetris type game (rotate and move in 3 dimensions). Husker Du - Colors and pattern rather than shape in this Tetris-esque game; 5 screens and 3 levels of difficulty. Requires Fat Agnus (1 Meg of Chip)
FD67: Arcade - Includes Llamatron a well-done 'Robotron' clone. Hate is a "terrific" Zaxxon clone with multiple levels/worlds and smooth diagonal scrolling...a 10!
FD69: MindGames - Had enough of shoot-em up games? Relax and let these 21 games exercise your mind instead of your wrist.
FD71A&B: Star Trek: TNG Trivia Challenge - So you think you know The Next Generation, huh? Complete with fantastic sampled sounds and digitized images, this game even looks and sounds like a genuine Star Trek terminal! VERY thorough and complete! Counts as 2 disks.
FD73: Arcade Series - Intruder Alert! is a MULTI-level "Berserk" clone. Features smooth gameplay, great graphics & digitized sound f/x.
FD74: Arcade Series - RingWar is an "Outer Limits" clone with vectorized graphics. MotherLode is a "Lode Runner" clone with 50 levels! In BlitzTanks, they're coming at you from all directions!! Call in air strikes and use your heavy artillery to survive!

THE AMIGAWORLD "BEST-OF" SET!

FD85ABCD: AmigaWorld's Best - These four disks contain the *hottest* p/d games of '92! Includes Mother Lode, Moria, Minefield, Poing, Intruder Alert, Deluxe PacMan, Rocky and Super Artillery (see Dec. '92 AmigaWorld) Four disk set, counts as three.

FD75: Arcade Series - Descender is a clone of the classic arcade game "Tempest"; complete with vectorized graphics. Tanx is the classic battle of trajectories and inertia between two tanks—incredibly well done! Search is a maze game unlike any other—included is a level editor too. (Tanx requires 1 meg chip memory=Fat Agnus)
FD77: Arcade Series - Galaga'92 is a clone of the arcade game with several gameplay enhancements--with smooooth, sharp graphics, it's better than the original! Pharaohs Curse is a clone of the original C64 classic. Diplomacy is a beautifully computerized version of the Avalon Hill board game--conquer or be conquered!
FD81: SuperGames - Some of *the* best games--Donkey Kong is better than the original *with an extra level*! Frantic Freddie and TrailBlazer are both fast-paced arcade games. Mad Bomber is the classic game of "Kaboom" redone with an Amiga flare. All of these games are excellent!
FD82: Intrepid - In the Arctic ice, you control a tank on a mission to rescue hostages in this superbly crafted Amiga original.

WORKBENCH DISKS

WB4:Telecommunication - This disk contains several excellent pd communication programs: Access 1.42, Comm 1.34 & Handshake 2.12a.
WB5: Fonts #1- Several fonts (35) for the Amiga, also included are five PageStream fonts,and ShowFont - a font display program.
WB6: Fonts #2 - ShowFont allows you to quickly and painlessly view all 256 characters in a typical font. Includes large AmigaDos system fonts (many up to 56pts).
WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.
WB9: Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.
WB10: Virus Killers - The best: VirusX(4.0), Kv(2.1), and ZeroVirus III.
WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A must have!
WB13: Printer Drivers and Generator - over 70 different drivers (including HP LaserJet 3&4!), also includes a printer-driver generator.
WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).
WB18: Word/Text Processors - This disk contains the best editors. Includes,TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features,TexED(v2.8) an enhanced Emacs type editor, and a spell checker.
WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.
WB23: Graphics and Plotting - Plot, a 3-D mathematical function plotter. Can plot any user defined function, BezSurf2 - produce awesome pictures of objects one could turn on a lathe. Can also map IFF image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen - makes a virtual screen anywhere.
WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.
WB26: Disk Utilities #2 - MrBackup, KwickBackup - two well done utilities to do harddisk and floppy disk backups, FileMast - a binary file editor, Labelprinter - Disk label printer with very powerful features.
WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.
WB29: Graphics and Sound - This disk has several different Mandelbrot type programs producing stunning graphics. Includes, MandelMountains - a realistic terrain generator, Fracgen - generate recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date. Sound - a great IFF sound player, will play anything.
WB33:Circuit Board Design - several terrific routines for the electronic enthusiast, Including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.

SPECIAL PRODUCT!

QT1: THE A64 PACKAGE - A very complete Commodore 64 emulator. Supports any CPU and is fully compatible with WB1.3 & 2.0. This version includes a special adaptor that will allow you to connect your 64's 1541 disk drive to your parallel port of your Amiga for total emulation. Two disk set, counts as two. Special price $49.95 - including hardware.

WB35: 3D Graphics - This disk contains several neat programs to use with your 3d modeling/raytracing programs 3Fonts - Full vector font set for use with 3d programs, FontMaker - make 3d fonts from any system font, Make3DShape - create 3d shapes from any image, DumptoIFF - create 3d animations preserves pallet, and World3d - a demo program of a front end for use with DKBRender.
WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrically similar to a rose, SimGen - display those spectacular images as part of your workbench, and RayShade - a very good raytracing program, create your own beautiful 3d graphic models with this one!
WB37: Educational - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15
WB38: Plotting and Graphics - Plotxy is a powerful full featured plotting package. Used by many colleges and universities. Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tesselator - a program that helps generates fantastic looking, recursive M.C. Ecsher type pictures.
WB41: Music - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your the Amiga. Similar to SoundTracker but better. Very powerful easy to use program. Version 3.20--compatible with WB2+.
WB43: Business - This disk contains AnalytiCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Req. 1.2 MB
WB46: Clip Art - HighRes clip art with the following motifs - embellishments (borders, dodads ,...), people, & transportation.
WB47: Clip Art - Hires clip art. Motifs - hair, drafting, summer, animals and macfood.
WB48: Clip Art - Hires clip art. Motifs - Holidays, music, medical, and misc.
WB50: Animation - Seven of the best european style animations or "Demos", including - scientific 451, subway (a U.S. entrant, also our favorite), sunride, thrstdemo, tnight, waves, and woow.
WB53: Graphics - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings..., and surreal images. C-Light is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars. Also, sMovie - a full featured video text titler similar to ProVideo, Broadcast Titler. Great video scrolling, wipes, special effects, and more...
WB54: Printing - This disk contains several routines to help with the chore of printing. Includes Gothic - Finally a Banner printer for the PD! PrintStudio -a well implemented all-purpose printer-utility with a very comfortable graphic interface and many advanced features, Lila - with ease, print ASCII files to a PostScript printer, and more.
WB55: Application - XCopyIII - a full featured disk copier, make backups of copy protected disks. RoadRoute - find the quickest route from one city to another, highway description included. Diary - a diary program like "Dougy Houser M.D", Cal - a calendar program, Magman - a database tailored for articles and publications.
WB57: Animation - This disk has several "Demo" style animations, Including, Blitter, Lolly, Sun5, vertigo, vortex, and xenomorph.

WB119ABCDE: Font Set This collection contains over 100 typefaces for use with Professional Page/PageSetter 3+ or PageStream 2.1+. These fonts will output to any laser printer or dot-matrix printer with no jaggies, thanks to outline fonts. Very pro-looking. *5 disk set, counts as 4.*

WB62: Midi Utilities - Several useful midi utilities including, programs to transfer to and from several music programs to midi, a midi sysex handler, a midi recorder with timebase, display midi info, file sequence player, and a few scores.
WB63: Disk Utilities #3 - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced disk validation of corrupt disks.
WB66: Icons #2- Lot's of neat icons. Also, several wonderful programs that to let you create your own icons, modify and manipulate icons and info structures.
WB69: Music - 90 minutes of classical and modern electronic music for you Amiga.
WB75: Music - over 100 instruments files (.inst) and sample sound files (.ss)
WB79: Home & Business Accounting - Includes Ckbacct - the most complete checkbook accounting program going, LCDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master - monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and Worldtime - find out what time it is in up to 50 global cities.
WB81: Great Applications - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.

Memorex blank disks-3½" DSDD

10 for	$8.00	(.80 cents ea)
25 for	$19.25	(.77 cents ea)
50 for	$36.00	(.72 cents ea)
100 for	$67.00	(.67 cents ea)

Canada/Mexico add $.15 ea., other foreign add $.50 ea.

WB82: Animations - Four full length, well done "movie" style animations. Including, Coyote, JugglerII, GhostPool, & Mechanix. 2 disks, counts as 1.
WB93: Workbench 1.3 Extras #2 This disk contains the utilities that Commodore should have shipped with the Amiga; VirusX4.0, Snap, FixDisk (recover corrupt/deleted files), Disk Optimizer (floppy & hard), MachIII (screen blanker, hotkey, mouse accel., macro, clock utility), GOMF (a gurubuster)and PrintStudio.
WB95: Checkbook Accountant 2.1 - This is definitely commercial grade; we've seen many checkbook programs and this is absolutely the best. Full budgeting, transaction recording and report generation.
WB96: Dupers - Contains XcopyIII & Nib which will backup copy-protected programs. FreeCopy removes copy protection from several programs, and SuperDuper will crank-out fast AmigaDOS copies.
WB99: Lifestyles - Includes AGene—family tree program that tracks up to 600 people/marriages/etc. Landscape is a CAD program to create gardens/landscapes. Loom simulates an 8 harness loom; experiment with pattern design with instant feedback.
WB102: Telecommunications - Contains the programs NComm 2.0 and VT100-29B. Zmodem protocols, XPR protocol support, full VT100 emulation. NComm's script language is so powerful it can create a full-featured BBS system.
WB106: Home Manager - This is a great all-in-one address book with an autodialer/notepad/to-do list/appointment scheduler/home inventory database and phone number dialer.
WB108: OctaMED - This breakthrough program doubles your Amiga's sound capabilities from 4 channels to an ear-popping 8 channels! All the renound editing capabilities of MED plus 4 more channels! If you thought your Amiga sounded good before...you aint heard nuthin' yet!

WB118: Amiga Beginner - *You asked for it!* A complete tutorial for the beginner on using the Amiga. Starts you off at the power-switch and takes you through to the CLI/Shell and all points in between. *Bonus!* Also included are 16-color icons to replace *every* icon in your 2.0+ Workbench.

WB109: VerseWise - Display, search and print The New Testament.
WB113: Sid II - Why pay 40 bucks for a directory utility, when this one will do it all plus much more! A truly professional-caliber program. Sid 1 was our best, now *completely* rewritten, Sid 2 will astound you.
WB114: Fonts #4 - Contains 36 bitmap system fonts.
WB115: Telecommunication - If you have AmigaDOS 2.04+ and a modem, then this is *THE* program for you. Term *totally* conforms to the User Interface Style Guide for 2.04, has an ARexx port, and supports all popular file-transfer protocols through XPR libraries. We wish all programs were this good.
WB116: Databases - This is what you've been waiting for! Contains 5 uniquely specialized database programs for tracking: Videotapes, CD's, Magazine Articles, Comic Books and Trading Cards!

DEV DISKS

DD54: Compression - This disk is loaded with all of the best file compression programs and aids for the Amiga. Many of the programs can be used by the new user. Includes Arc, Lharc, Lhwarp, Pkax, PowerPacker a must have by all, Zip, Warp, and Zoo. Also IFFcrunch an excellent compression for IFF files.
DD71AB: C Compiler - This disk contains DICE, Matthew Dillon's full featured, powerful C compiler & environment. 2 disks, counts as 2.
DD86: The Programmer - Includes GadTools and REQTools which will allow you to create your user interfaces and then the program will automatically generate "C" source code or Assembly-code. Requires, and writes code for, AmigaDOS2+.
DD89: UEdit - Probably *the* most powerful text editor ever written for the Amiga. Previously commercial, now public domain. Req. 1 MB.

VIDEO DISKS

VO5: Modeling - This demo, Vertex, allows you to create 3-D objects without using the abstract X, Y and Z views. Loads Sculpt-3D/4D, Turbo Silver, Imagine, LightWave, GEO and Wavefront formats. MagicTween will metamorphasize any two pics and animate the "in-between" frames.

USE OUR TOOLCHEST ORDER FORM OR ORDER TOLL-FREE (800) 879-0759!

DevWare ToolChest

Formally the AmigaWorld ToolChest!

Unicorn Educational Software

DevWare has made a special purchase of these educational programs at a remarkable price and we're passing the savings on! *All titles have original list prices of $49.95 to $59.95!*

All About America T2041 **$16.95**
Ages 6 to 11. Each of these 16 stories will give your students an introduction to American History. Stories are followed by reading comprehension and vocabulary questions. The map disk includes maps of the 13 colonies, the U. S. before the Civil War, the 50 States and geography quizzes.

Land of the Unicorn. T2042 **$16.95**
Builds important vocabulary and logic skills through the use of interesting and exciting language arts activities including Synonym Review & Quizzes and Antonym Review & Quizzes.

Adventures of Sinbad T2043 **$14.95**
Ages 9 to 14. The adventures with Sinbad will capture your student's interests and imaginations while building critical reading and vocabulary skills.

Aesops Fables T2044 **$14.95**
Ages 6 to 9. Each of these 12 charming fables comes with games which will help build reading comprehension and vocabulary skills.

Decimal Dungeon T2045 **$14.95**
Ages 9+. Trapped inside the crystal caverns of the Dungeon Master, the only way to escape is to answer the math problems correctly.

Fraction Action T2046 **$14.95**
Ages 8+. Multi-screen arcade action and sound educational content in the basement of the Mad Professor's Mansion.

Kinderama T2047 **$14.95**
Preschool to First. 5 different learning activities: Robot Story, Count the Robots, Robot Match Letter, Robot Addition and Robot Construction.

Magical Myths T2056 **$14.95**
Ages 9 to 14. Journey into the world of Greek Mythology while building important reading comprehension and language art skills.

Math Wizard T2048 **$14.95**
Grades 1 to 6. Build essential arithmetic skills and a foundation for more advanced mathematical concepts with Wizard's Flash, Elf's Equations, Dragon Race and Troll's Toy Shop.

Read-A-Rama T2049 **$14.95**
Grades K to 3. Animated circus setting helps build important reading, word recognition, spelling and concentration skills.

Read & Rhyme T2050 **$14.95**
Ages 5 to 8. Boost alphabetizing, rhyming, vocabulary and phonetic skills as the students interact with exciting space creatures.

Tales from the Arabian Nights T2051 **$14.95**
Ages 9 to 14. These 3 captivating tales will entertain and enhance your children's reading comprehension, creative writing, and language arts skills.

The Logic Master T2052 **$14.95**
Ages 10-Adult. Will help develop critical, high-level thinking skills through the introduction of a broad variety of analogy and number series activities.

Wonders of the Animal Kingdom T2053 **$14.95**
Ages 6 to 12. Six outstanding learning activities: All About Animals, Animal Spells, Animalgrams, Who Am I?, What's Different, and Animal Memory Game.

Word Master Vocabulary Builder T2054 **$14.95**
Ages 8 to 14. Captivate your students and build essential word power skills with Vocabulary Test, Master's Review, Vocabulary Challenge and Master's Maze.

Get any 3 Unicorn Titles and SAVE! T2055 **$39.95**
Get Any 5 Unicorn Titles and SAVE! T2059 **$64.95**

Free Spirit Software

Barney Bear Goes Camping (Ages 2-6) T1078 **$12.95**
Barney Bear Goes to the Farm (Ages 2-6) T1079 **$12.95**
Barney Bear Meets Santa Claus (Ages 2-6) T2057 **$12.95**
Barney Bear Goes to Space (Ages 2-6) T1080 **$12.95**
Barney Bear Goes to School (Ages 2-6) T1081 **$12.95**
Get all 5 Barney Bear Adventures! T2058 **$54.95**

Cancor Software

Mathasaurs (Ages 3+) Children play an action adventure game while learning addition, subtraction, and expand their minds. T1087 **$15.95**
Mathasaurs II (Ages 3+) T1088 **$15.95**
The ABC Land (Ages 3+) T2030 **$18.95**

Special Edition ToolChest

RK1: MegaBall - This disk contains the full-release version of MegaBall, complete with the level editor to create your own challenging worlds to conquer. This game is quite similar to Arkanoid and allows two players with stereo sound and 5 soundtracks! Special RK price, $14.95.

RK2: MachIII - This remarkable utility will allow you to record any mouse click or keypress and play it back as a macro at any time, inside any program. Also provides memory info/clock, alarm, screen blanker, mouse accelerator, mouse-to-menu, sunmouse and window cycling. Special RK price $19.95.

RK3: 3D Objects an amazing collection of some great 3D objects we've ever seen. Running man, spaceships, staircase, hoverboats & much more. Also texture maps to wrap around some of the objects...1.5MB of data in all! $14.95

RK4: Home Manager This program will help you keep track of your life! Complete address book, appointment scheduler, notepad, auto-dialer (requires modem), area-code utility and complete inventory of all your possessions and credit cards. Extremely useful. Requires 1 Meg. $14.95

RK5: Diffusion an Alien terrorists plants a Nuclear Time bomb and you are the only chance of saving the world! Outstanding graphics and sounds complete the mood of this futuristic race against time and devastation! $14.95.

HomeBuilders CAD v2.0

From a room addition to a cluster of condos; HomeBuilders CAD makes it easy to design, change and estimate your next project. Features include: 20 acre drawing area. Accuracy to 1/60 inch. Supports buildings over 200 stories high. Over 300,000 layers. Over 60 predefined doors and windows. Drawing features include PAN, ZOOM, ROTATE, COPY ADD TEXT, AUTO-DIMENSIONING, UNDO, and TOPOGRAPHY. View plumbing and electrical components separately. Automatically generates wireframe FRONT, REAR, and SIDE elevations. Spreadsheet-style cost editor. Calculates material, labor and overhead costs. Displays or prints cost summary or detail. Calculates backfill and excavation costs. Easy-to-use documentation. AmigaDOS 2.0 compatabile. With 2 disk drives, requires 1MB with hard drive, requires 1.5MB. T2040 Original list: $249. **New LOW ToolChest Price!** Only **$49.95!**

dbForm 2.0

A complete form design and invoicing system for business or home use. This remarkable program features powerful layout tools that are completely integrated with the built-in database capabilities yielding a completely configurable and ultimately powerful form creation/invoicing/database management solution. **Drawing features** include user selectable corner types, line weights, line patterns and automatic grid creation. Imports IFF files. **Text and Data features:** specify a box's front and point size, use Bold, Italic and Underlined, align to left, right or center, link text boxes so that text flows from one box to another, imports ASCII text files. Data fields' fill order is user specified. **Printing features:** print in text only mode for speed and quality, print text and graphics, print **PostScript**, printing can be scaled on both axis by percentage. *Many* other features! T2041 A great value for this powerful all-in-one package! Only ***$29.95!***

The DevWare ToolChest, a quality line of low-cost software, presents powertools for your Amiga. By purchasing this software you receive unmatched versatility, usability, and best of all, you support the independent Amiga developer. The "TSP" disk series are collectively grouped by theme for your easy access. The "RK" anthology are registered, fully-functional versions of the cream of the crop in shareware titles. The "TC" line, our premium disk series, is also conveniently available in our money-saving subscription offer. Amiga musicians make sure you check out our brand-new AM/FM series. they're packed with fantastic utilities!

100% Satisfaction Guaranteed

TSP32: Classic Arcade Games Defender and Missile Command--need we say more? Descender is a clone of the classic Tempest. $5.95

TSP31: DataBases Contains all flavors of databases. BBaseII is a highly Amiga-tized database, DataEasy is another powerful database. MagMan is specially designed to help reference articles in magazines. $5.95

TSP30: Educational This includes WorldDataBase, DrawMap--which draws detailed maps of countries. WordGame, Metric Converter, Spell2--an ingenious spelling challenger, FastFacts--everything you always wanted to know about our Solar System. $5.95

TSP14: Plotters This disk contains several of the best mathematical plotting programs available for the Amiga. Includes AmigaPlot--a 3-dimensional mathematical function plotter (pictured), Aplot2.0, and PlotXY $5.95

TSP13: Tetris Games Contains 6 flavors of the classic game "Tetris." Some have artificial intelligence, others a variety of play-styles/skill levels/number of players.

TSP12: ClipArt This disk contains several excellent bitmapped images for use in Desktop Publishing or similar programs. $5.95

TSP9: Utilities #1 IconMeister—an Icon editor with a complete set of editing/painting tools. TJFormat—a disk formatting program that will format disks that AmigaDOS wont. ChartMaster—a graphing tool that allows you to generate and save different graphs in IFF format. Graph3D lets you visualize complex data in 3-D and save the results. StructGen lets you create gadgets, text, bitmaps and window structures and the program will automagically write the "C" source code for you. LabelMaker is a very easy to use, full featured label printer. DoublePrint facilitates printing of text files on both sides of paper. $5.95

TSP8: Clipart Black & White and colorful clipart for a variety of needs including desktop publishing/video. People, holiday related, school items, scrolls, food, monsters, fish, lobsters, symbols and lots more. $5.95

TSP6: 3D Vector Objects #1 Lamp, mirror, bed, chair, fire hydrant, lamp post, street lamp, street sign, traffic light, cannon, cannon supplies, rose, fork, spoon, knife and plate. All objects in Sculpt/TurboSilver format. $5.95

TSP2: Sounds Animal sounds, musical instruments and many, many more—43 sounds in all! $5.95

TSP1: Maps of USA, Canada and Europe Hi-Res IFF brushes of all 50 US States, 10 Canadian Provinces and countries in Europe. Each map has a 3D extrusion effect with cast shadow. $5.95

TC38AB: Galaga is better than the arcade original. Geotime shows the world and where its light/dark. Restaure is an easy-to-use file un-deleter. SysInfo shows memory, boards, speed & other system info. VideoPoker will save you hundreds of $$ in a casino. Also includes sound effects & very detailed Impulse object of remote control. $9.95

TC37AB: DeluxePacMan is hotter than the arcade game with power-ups and new levels. SubStore allows you to keep tack of your magazine collection. Kwickback will give quick, reliable backups of your hard drive. Also includes 3D Tic Tac Toe, Rolodex to keep track of names/numbers and BeatStomperII--a fun and functional drum machine for your amiga. Also includes 3D object of giant robot & sound effects. $9.95

TC32AB: Computer Coloring Book is a delightful program for children of all ages—comes with 15 pages of pictures to color again and again. Listmaker lets you make, edit, combine and print lists of words—great for spelling tests. Moresmooth! scrolls text files smoothly on the screen and allows easy printing. Pocket Billiards lets you choose from several popular pool games with realistic action. Texture allows you to create, manipulate and save (in standard IFF format) realistic fractal textured surfaces. Plague is a monster maze game. Also includes Screen Fader, Snowbench, and FlipBench. $9.95

ToolChest Exclusive! Amiga Musicians Floppy Magazine

The Disk Magazine for anyone who has an Amiga and likes music!

Whether you're into composing, collecting, studying, or simply enjoying music, then AM/FM has lots to offer. If you want to learn more about using the Amiga as a music computer, then AM/FM is for you. Each disk contains news, reviews, previews, hints & tips, tutorials, new sounds for popular synthesizers, lots of great Amiga music, and the latest sound and music utilities! Each issue contains 2-5 Amiga songs, 2-5 MIDI songs and **4-8 Sound/Music Utility programs!**

AM1: Sound Storage for Yamaha, Korg and Kawai. MIDI analyzer, ProTimer, 3 MIDI and 4 Amiga songs
AM2: MIDI time tool, Yamaha DS-55 voice editor. Utility to convert MIDI to text for edit/printing. 4 MIDI and 4 Amiga songs.
AM3: Roland D10 Drum, Tone and Patch editors. ProPlayer (for MODS), 4 MIDI and 3 Amiga songs.
AM4: Roland D110 Bank Loader, Editor. Sample storage/loader utils., 4 MIDI and 4 Amiga songs.
AM5: Yamaha TX-81Z, FB-01 & Korg M1. Realtime full-screen oscillator. Editor/Storage pgms, 5 MIDI and 2 Amiga songs.
AM6: ProPlay 2, MultiRipper, Casio CZ101/CZ1000 sound storage system. 5 MIDI and 4 Amiga songs.
AM7: Kawai K4 editor Pro 1.99, MIDI diagnostics, TrackSheet-X, MIDICom, Tracksheet-X, 6 MIDI and 3 Amiga songs.
AM8: MIDItools: EchoProcessor/Midi Keyboard/SysEx/ProgChange, music ripper, Promizer. 5 MIDI and 4 Amiga songs.
AM9: Kawai K4 Editor Pro v.2.99, Kawai K1/K1-II/K1-R/K1-R II Editor v5.3., Thief 3.0, JoinSounds, 3 MIDI and 4 Amiga songs.
AM10: CDTV ARexx control, Playsound (play large samples off disk with small memory), 5 MIDI and 5 Amiga songs.

The AM/FM Sample disks are chocked full of superb quality samples from the latest and best in synthesizers, drum machines, etc.

SM1: 45 drum & percussion sounds from Roland PCM 10 sound card with added reverb for best possible sound quality.
SM2: 58 orchestral winds sounds. Many diff. flutes, brass, saxes, trumpets, bass chords, untraditional and ethnic winds.
SM3: 30 atmospheric non-instrumental death & horror sound effects for that scary edge!
SM4: 32 lead, bass & background sounds from Korg 707 synthesizer. Great dynamics and originality.
SM5: 16 rich, full & dynamic Grand Piano sounds, chords also sampled. Also piano with strings, voices and pads.
SM6: 48 characteristic samples from Korg Wavestation. Some chords, but mostly lead/bass/effects.
SM7: 53 characteristic samples from Korg Wavestation. Lead/bass/effects, no chords, no percussion
SM8: 46 chords from Korg Wavestation. Pads, choirs, synths, etc. etc. Major, minor, sus2, sus4, add6 and add7 chords!
SM9: 84 drums/percussions from Korg M1. All stndrd drums, plus many rythmic effects, hits, lasers, etc. etc.
SM10: ambient and hard-hitting sounds made on Korg Wavestation. If your looking for truly unique sounds...this is it!!!
SM11: More special/atmospheric sounds. Truly unique and characteristic sounds made for the AM/FM magazine.

Pricing: AM series disks: $.9.95 each. **Special introductory offer: Buy 4 and get the 1 free! Buy 7 and get 2 free!!** SM series disks: $7.95 each. AM & SM series disks do not count towards normal (TSP & TC) disk pricing levels.

A DevWare ToolChest *Exclusive!*

A complete, high-level programming language *for only* **$19.95!**

True BASIC 2.0, Student Edition

T2033 "...After years of language and compiler hopping, I am convinced there is only one programming environment...this new release of TrueBASIC for the Amiga *is* that environment." (*Amazing Computing*, Sept. '92)

The most recent release of TrueBASIC, the powerful programming language from Kemeny & Kurtz, the original creators of BASIC. You will receive the Language, libraries for font support, DO files, script files, more than 30 demo programs, and a 200+ page manual. **System requirements:** Any Amiga with one Megabyte of memory.

Student Edition Highlights:

- with this version you can run TrueBASIC programs of *any* size
- Modern structured format allows you to combine smaller program sections into larger, sophisticated programs
- Superb built-in graphics and color capabilities...handles sound and music effortlessly.
- Advanced program editor enables you to quickly compose or modify programs.
- Built-in math functions, debugging facilities, and on-line help files!
- Special Amiga font and IFF graphics handling features.

TrueBASIC programs are portable to DOS, Macintosh and most UNIX workstations. now you can use the same program code across all platforms for the powerful portability that every programmer dreams about!

Get special pricing on these other TrueBASIC math programs!

Algebra I - Now Only!	T1074	$14.95	Algebra II - Now Only!	T2034	$14.95
Calculus - Now Only!	T1082	$14.95	Pre-Calculus - Now Only!	T2035	$14.95
Trigonometry - Now Only!	T1093	$14.95	Discrete Mathematics	T2059	$14.95
Probability Theory - Now Only!	T2060	$14.95	TrueSTAT - Now Only!	T2061	$14.95
Get any 2 math programs	T2036	$26.95	Get all 8 math programs	T2062	$94.95
Get all 8 *Plus* TrueBASIC 2.0	T2063	$109.95			

Please send me: Enter product ID (Ex: V2052, FD85, TSP10)
Including any products from DevWare Public Domain or DevWare Video!

Total DevWare PD disks ____ @ $_____ ea. = $_____
PD-Disk based catalog ($2.50) = $_____
(Catalog disk comes with a coupon for a free disk with your next order)
Anti-Virus ($19.95) = $_____
Products from DevWare Video/PD/ToolChest = $_____
Memorex Blank Disks #_____ = $_____
CA Residents add 7.75% sales tax = $_____
Foreign Shipping = $_____
Shipping & Handling *(see below)* = $_____
Total Due = $_____

CC# ____________ Exp ______
Signature ____________
Name ____________
Address ____________
City ____________ ST ___ Zip ____
Phone (___) ____________

[ ] Payment encl.
Please charge my:
[ ] Visa
[ ] Mastercard
[ ] Discover

Following day shipping in most cases. **Public Domain Disks:** $3.50 minimum per order. Canada add $.25 per disk, Foreign add $.50 per disk for airmail delivery. **Videos/Books/hardware/ Software:** $5 minimum per order plus $1 for each add'l unit shipped. Canadian minimum $7, plus $1 for each add'l unit--call for book shipping. Foreign: call. All payments in U.S. funds only. **A minimum of $20.00 required on all credit card orders.**

DevWare, 12520 Kirkham Court, Suite 1-AW38, Poway, CA 92064
Orders Only Please! (800) 879-0759 **Support** (619) 679-2825 **Fax** (619) 679-2887

Save 39%!! Subscribe!

- Get the **hottest** new programs *automatically* from ***DevWare!***--A mixture of utilities, application, games & more!
- *Receive 6 bi-monthly double-disk issues for just $49.95!*
- **Save $39.45** off single-issue price!*
- Convenient automatic home delivery
- Lowest possible prices!
- **Full Money-Back Guarantee:** If not completely satisfied, we'll refund your money--no questions asked.

*Based on single-disk pricing including handling.
Canadian subscriptions add $5.00 shipping, all other Foreign add $10.00 shipping.

Software Hut

Commodore **AMIGA**

Folcroft East Business Park   313 Henderson Dr   Sharon Hill, PA 19079

Info 215-586-5701
FAX 215-586-5706

Orders 800-93-AMIGA

Hours: Mon-Fri 9 to 6
Sat 9 to 5 - Eastern

We do not publish a catalog. Please call if you don't see what you want.

- ***The largest Authorized AMIGA dealer in the United States***
- ***Full line of Hardware, Software, & Peripherals... IN STOCK***

Accelerators & RAM Boards

ll GVP Products In Stock	**Call**
ataFlyer 8Mb Board w/2Mb	$165.00
erringer 25Mz w/Math Co & 4Mb	499.00
IBX board for A1200 14Mz/0K	149.00
IBX board for A1200 25Mz/0K	249.00
MB & 8MB RAM for MBX boards	Call
rogressive Accelerators In Stock	Call
upra 500RX RAM 2Mb	189.00
XL Accelerator & RAM in Stock	Call

Power Supplies, Video, & More

3070 Tape Backup 150Mb	**Call**
ony 6150 Tapes	$21.95
590 Hard Drive	**Call**
yquest 88Mb Removable Drive	389.00
yquest 88Mb Cartridge	119.00
yquest 44Mb Cartridge	75.00
ual Bay Ext. Case w/Cabling	109.00
-Max 2 Plus Emulator	345.00
lac 512K ROMS	Call
ig Foot Power Supply	89.00
2000 300W Power Supply	179.95
olden Image Amiga Mouse	29.95
anus 2.1 Upgrade Kit	35.00
raft Triple Track Trackball	40.00
liracle Keyboard Learning System	329.00
ersonal TBC 3	789.00
ocGen Plus	279.00
peedking Analog Amiga Joystick	21.00

Motherboards

500 w/swap-All Revs	$150.00
2000 w/swap-Rev 6 or above	225.00
2000 w/swap-Rev 3.9 to 4.5	400.00
2000 Rev 6.X Motherboard	499.00
3000 25Mz w/swap	449.00

RAM & Other Chips

lotorola 68030 RC CPU 50Mz	$199.00
lotorola 68882 Math Co 50Mz	139.00
oth Above Motorola Items	299.00
lulti-Start 2 v6A 500/600/2000	45.00
x4 Static Zips for A3000	Call
x4 Page Zips for A2386 Bridge +	19.00
x8 SIMM All Speeds Available	33.00
x32 SIMM 70Ns for A4000/MBX	149.00
x32 SIMM 70Ns 8Mb for MBX	299.00
x32 SIMM for DKB 2632 Board	Call

HARD DRIVES

A2091 SCSI Controller	$69.00
2MB Ram for A2091	80.00
Maxtor 120Mb LPS HD	269.00
Conner 212Mb LPS HD	**359.00**
Maxtor 213Mb LPS HD	369.00
Quantum 240Mb LPS HD	439.00
Toshiba, Fujitsu	Call
Other IDE & SCSI drives	Call

Looking for LARGE Hard Drives? We have the BEST prices on Toshibas. These compact drives are rated highest in speed and dependability. Toshiba 540MB, 877MB or 1.2Gig 3.5" HH... CALL

SPECIALS ON A500 PARTS

Limited Supply of Specially Priced and Selected A500 Parts. All are New and with a 1 Year Warranty.

A501 512K RAM A500	$35.00
A500 Keyboard	29.95
A500 Int. Floppy Drive	49.95
A500 Complete Case w/Shield	24.95
A500 Motherboard Rev 5	119.95

EXCLUSIVE

CBM A2024 Hi-Res Monochrome Monitor

- 1008 x 600 Resolution
- 14" Paper White
- NTSC & PAL for ALL Amigas
- Supports AGA Disp. Modes
- Originally $895.00

NOW $189.00

CBM PARTS & PERIPHERALS

A2320 DeInterlace Board	$134.00
A2386SX Bridgeboard	479.00
A2232 Multi Serial Board	225.00
A2065 Ethernet Card	265.00
A520 Video Adapter	29.00
A2000 Keyboard	59.95
A3000 Keyboard	59.95
A1000 Keyboard Adaptor	16.95
A2000 Complete Case NEW	59.95
A2000 Int Floppy Drive	69.95
A3000 Int Floppy Drive	69.95
A500 Power Supply *	35.00
A1000 Power Supply	62.00
A2000 Power Supply	109.00
A3000 Power Supply	109.00
A1050 256K RAM A1000	39.95

MONITOR SPECIALS

1802 - Composite NTSC Color Perfect 2nd/3rd Toaster monitor
$145.00

1084S - Current color stereo model w/Amiga cable
$275.00

A1960 - Multiscan Monitor
$489.00

DIGITAL CREATIONS

DCTV	$295.00
RGB Converter for DCTV	195.00
Kitchen Sync TBC	1279.00
Genlock Option for Kitchen Sync	145.00
S-VHS Option for Kitchen Sync	99.00
SuperGen	539.00
SuperGen 2000S	1179.00

WB2 Upgrades

DOS 2.1 Kit w/ROM
$86.00

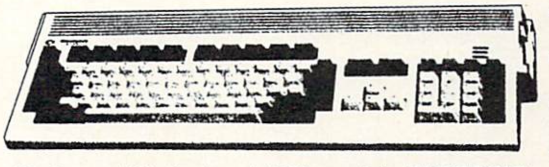
2.1 Enhancer - no ROM
$47.00

A2620/A2630 Eprom Kit
$35.00

2.1 ROM Upgrade Kit A3000
$42.00

NEW! AMIGA 1200

- *AGA Chips & 14 Mz 68EC020*
- *16 Million Colors & OS 3.0*
- *PCMCIA Card Support*
- *Flicker Free Support*



We have ALL Amiga A1200 models IN STOCK!

- **HDs installed by our Commodore trained technicians**
- **Commodore Gold Service Warranty is fully maintained**
- **Our Prices include All cabling & complete installation**
- **A1200 prices include FREE SHIPPING!**
- **Never any hidden charges**

A1200	**$599.00**
A1200 w/40 Mb Quantum HD	**778.00**
A1200 w/60 Mb Western Digital HD	**828.00**
A1200 w/84 Mb Conner HD	**868.00**
A1200 w/85 Mb Maxtor HD	**868.00**
A1200 w/128 Mb Maxtor HD	**968.00**
A1200 w/235Mb Seagate HD	**1218.00**

A600 - A1200 Upgrades

MBX1200 68881 14Mz 0K	$149.00
MBX1200 68881 14Mz 4Mb	289.00
MBX1200 68881 14Mz 8Mb	459.00
MBX1200 68882 25Mz 0K	229.00
MBX1200 68882 25Mz 4Mb	379.00
MBX1200 68882 25Mz 8Mb	529.00
MBX1200 68882 50Mz 0K	339.00
MBX1200 68882 50Mz 4Mb	489.00
MBX1200 68882 50Mz 8Mb	645.00
MBX1200z (w/Clock) ADD	20.00
Microbotics 12 A'Clock	35.00
PCMCIA Card 600/1200 2Mb	145.00
PCMCIA Card 600/1200 4Mb	229.00
Quantum 2.5" 40Mb IDE HD	159.00
West. Digital 2.5" 60Mb IDE HD	209.00
Conner 2.5" 84 Mb IDE HD	249.00
Maxtor 2.5" 85 Mb IDE HD	249.00
Maxtor 2.5" 128 Mb IDE HD	349.00
Seagate 2.5" 235 Mb IDE	599.00
IDE Cable for 600/1200	20.00
IDE Cable w/HD purchase	10.00
15-23 Pin Converter	19.95
GVP 1230 Turbo+ (All)	Call
GVP 1200 SCSI/RAM+ (All)	Call
601 1Mb RAM w/Clock	84.95
601 RAM w/Clock - No RAM	34.95

hiDex

External Model: $124.95
A2000/3000 Internal: $99.95

Software Hut EXCLUSIVE Hi-Density Floppy Drives

You no longer need an A4000 to use high density floppies. Any Amiga with WB 2.04, or higher, can now use these *external* units. hiDex floppy drives feature CBM's approved hi-density mechanisms and a full 1 Year Warranty. They also perform as normal 880K drives & support A-Max2 Plus & 386 BridgeBoard. They come in a sturdy, complimentary painted, metal case. Why buy a regular drive when a few extra dollars gets you a hiDex Hi-Density model.

Software Top 20

Ami-Back 2.0	$42.00
Ami-Back Tools	**49.00**
Art Department Pro	159.00
Art Expression	**159.00**
Brilliance	159.00
Broadcast Titler 2	239.00
Caligari 24	279.00
CrossDOS 5 w/CrossPC	39.00
Deluxe Paint 4.5 AGA Version	135.00
Directory Opus V4	68.00
Excellence 3.0	**65.00**
Imagemaster	149.00
Image FX by GVP	239.00
Imagine 2.0	229.00
Morph Plus	**169.00**
Pixel 3D Pro	159.00
Pro Write 3.3x	59.00
Quarterback 5.x	43.00
Scenery Animator 2	65.00
Vista Pro 3.0	59.00

2630 ACCEL

- 68030 & 68882 Math Co 25Mz
- 4 Megabytes of 32 Bit RAM
- 1 Year Warranty by Commodore
- Fully DOS 2.0 Compatible
- Originally $895.00

NOW $489.00

AMIGA CUSTOM CHIPS

Newly Reduced Prices
Call for Quantity Discounts

1Mb Agnus 8372A	***$38.95***
Super Denise 8373	***29.95***
CIA 8520 chip	***9.95***
Gary 5719 chip	***13.95***
Paula or Denise chip	***19.95***
2.05 ROM chip	***42.95***
1.3 ROM chip	***23.95***

DKB

Megachip board w/2Mb Agnus
$219.95

Please call for Entertainment Software.

OUR POLICIES

No waiting for your orders to ship. Orders in by 2PM go out the same day. Second Day & Overnight shipping is available. International orders are shipped by Air Parcel Post or DHL. Domestic orders are shipped UPS or Federal Express.

• All orders are subject to credit card verification •

VISA MasterCard DISCOVER

Due to advertising schedules, all prices are subject to change. We accept Visa, Master Card, and Discover. We also ship COD, accepting Cash, Certified Check, or Money Order. Software and accessories shipping is $4.00. Hardware shipping is $6.00 for small items, $12.00 for Monitors. Call for larger items. COD add $5.00. Minimum COD order is $50.00. Canadian, APO, & International orders are welcome. We will bill only for actual shipping charges & insurance at time of order. 15% re-stocking fee on all returns not exchanged.

Manufacturers'/Distributors' Addresses

AirMouse Remote Controls
30 Mountain View Drive
Colchester, VT 05446
802/655-9600

Allied Studios
482 Hayes St.
San Francisco, CA 94102
415/863-1781

AmiGrafix
PO Box 2063
Apopka, FL 32704
407/884-9557

ASDG
925 Stewart St.
Madison, WI 53713
608/273-6585

Black Belt Systems
398 Johnson Rd.
Glasgow, MT 59230
406/367-5513
800/TK-AMIGA

Blue Ribbon Soundworks
1605 Chantilly Drive
Suite 200
Atlanta, GA 30324
404/315-0212

Bruce Smith Books Ltd.
Smug Oak Green
Business Centre
Lye Lane
Bricket Wood, Herts.
England AL2 3UG
44-923-894355

Commodore Business
Machines
1200 Wilson Drive
West Chester, PA 19380
215/431-9100
215/436-4200

Dennis Palumbo
104 Barrymore Blvd.
Dept. X
Franklin Square, NY
11010
516/352-5605

Ditek International
2800 John St., Unit 15
Markham, Ont.
Canada L3R 0E2
416/479-1990

Eagle Tree Software
PO Box 164
Hopewell, VA 23860
804/452-0623

80 Track Software
distributed by InSync Digital

Electronic Arts
1450 Fashion Island Blvd.
San Mateo, CA 94404
415/571-7171
800/245-4525

Electronic Innovative
Design (EID)
768 Two Mile Parkway
Goodlettsville, TN 37072
615/972-8085

Felsina Software
4440 Finley Ave., #108
Los Angeles, CA 90027
213/669-1497

Gold Disk
5155 Spectrum Way, Unit 5
Mississauga, Ont.
Canada L4W 5A1
416/602-4000
800/GOLD DSK

Great Valley Products (GVP)
600 Clark Ave.
King of Prussia, PA 19406
215/337-8770

INOVAtronics
8499 Greenville Ave.
Suite 209B
Dallas, TX 75231
214/340-4991

Innovision Technology
1933 Davis St., #238
San Leandro, CA 94577
510/638-0800

InSync Digital
PO Box 309
Oceanside, NY 11572
516/678-9624

KarmaSoft
PO Box 1034
Golden, CO 80402
303/490-2939

Legendary Design
Technologies
25 Frontenac Ave.
Brantford, Ontario
Canada N3R 3B7
519/753-6120

Mach Ten Computer
Products
28 Heathrow Manor Court
Baltimore, MD 21236
410/529-5361
800/925-3587

MA-PITOM Software
531 Norwich Drive
W. Hollywood, CA 90048
310/657-9226

MicroBotics
1251 American Pkwy.
Richardson, TX 75081
214/437-5330

Migraph
32700 Pacific Hwy., Suite 12
Federal Way, WA 98003
206/838-4677

Mirror Image Productions
30 Aurora Court, Suite 1209
Scarborough, Ont.
Canada M1W 2M3
416/495-7469

NewTek
215 S.E. 8th St.
Topeka, KS 66603
913/354-1146
800/843-8934

Phase Five Digital Products
Hamburger Landstrasse 412
6000 Frankfurt 50
Germany
49-69-548-1844

Progressive Peripherals
& Software
938 Quail St.
Lakewood, CO 80215-5513
303/238-5555

Saxon Industries
14 Rockcress Gardens
Nepean, Ontario,
Canada K2G 5A8
613/228-8043

Soft-Logik Publishing
11131 South Towne Sq.
Suite F
St. Louis, MO 63123
314/894-8608

SoftWood
PO Box 50178
Phoenix, AZ 85076
602/431-9151

From p. 6.
Brian Berg, who runs the multimedia lab at Arizona State University, has good advice for the Amiga artist wannabe: "Prepare a strong portfolio of slides, prints, and videos. Devote the time during your education to this task before actually entering the job market."

A college atmosphere may not be for everyone. As Mike Hanish observes, oftentimes, life experience and a unique point of view may serve you better than a degree. Other informational and learning opportunities exist outside of the academic environment:

- check out your local Amiga users club to see if it contains a special-interest group dedicated to graphics and animation
- contact your nearby Amiga dealer for computer courses being offered
- attend computer shows, where professionals may be teaching seminars and workshops on computer art
- stay informed about the constantly changing computer art industry
- frequent the on-line electronic networks, which offer areas for Amiga users, as well as for artists
- become a member in a professional (computer art) organization

Finally, Hanish advocates that aspiring artists should "find people whose work you admire and study or connect with them."

Above all, stay tuned to what's happening in the world around you. "To design effective computer graphics, you need the intuitive ability to perceive what is eye-appealing. Try to recognize the techniques used to create the commercials, print ads, and demo reels you view," comments Berg.

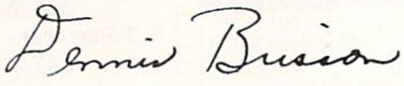
Rick Manasa has some advice for those who might consider themselves "out there" and who find traditional vehicles too limiting: "Watch the credits at the end of movies that display dazzling graphics (or the kind of graphics you like). Sometimes listed are 'cowboy animators' who set up shop on their own, because they didn't fit in the mainstream. Contact them for advice."

Colorado student James asserts that while we should learn from the work of others (classic cartoons and animations, for example), it is best to "try to have your own sense of style and use of color—it may help you stand out from the pack and get the career you want." Also, he adds that it doesn't hurt if your work reflects an appropriate sense of humor.

But most of all, declares Bruce Elliot, "Don't wait. Buy an Amiga and some basic software and try out your talents. Most software programs are easy to master and allow you to do things impossible to do in the more traditional materials."

Computer use is not only an inventive way to accomplish tasks, but computer skills are fast becoming requirements for success in today's high-tech society, both in the classroom and the workplace, where companies are actively seeking computer-literate employees.

No matter what direction you take, computer knowledge is essential. As one of our Amiga artists says, "computers are steadily making inroads into nearly every aspect of the art and animation culture, making a solid knowledge of computer animation and art essential to obtaining a career as an artist."



Dennis Brisson
Editor-in-Chief

BRiWALL

1-800-766-5757
(USA & Canada)

Outside USA:	(215) 683-5661	Tech Support:	(215) 683-5699
Customer Service:	(215) 683-5433	FAX:	(215) 683-8567

BBS: (215) 683-7499 (300-9600 baud 8N1)
Order lines are open 24 hours (Briwallians are in 9-8EST)
Store Hours:Monday-Friday 9AM- 6PM, Saturday 10AM-2PM
P.O. BOX 129/58 Noble St., KUTZTOWN, PA 19530

Commodore A1200 -- $559

The Amiga 1200 boasts a full 32-bit architecture, 68020 processor, Workbench 3.0, the new AGA graphics chip set, 2MB Chip RAM, and an internal IDE hard drive controller.

We're A1200 specialists, and can configure your new A1200 with hard drives, memory, accelerators, SCSI controller, and accessories. Call and we'll help you put a system together!

Featured Products

CSA's Twelve Gauge -- 50MHz 030 accelerator with RAM, math coprocessor, and SCSI interface -- Call for pricing!
Vidi12 -- Color AGA graphics video digitizer -- $149
PCMCIA -- 4MB memory card -- $229
128MB Maxtor 2.5" IDE hard drive -- $359
MBX1200Z -- 32-bit memory board w/Clock -- $139

CSA's Platinum

Now get roaring speed with the new 50MHz 68030-based accelerator for the A500/2000. Expandable with up to 32MB RAM and 50MHz 68882.
50MHz Price -- $859
(with 50MHz 68882 and 4MB of 60ns RAM)

DiamondScan 1391A

Here's the Mitsubishi monitor you've been looking for! With a scan rate of 15.75-36KHz, **and** Composite video input, this 14" monitor is great for every Amiga from the A500 to the A4000, as well as all video applications.
Briwall Exclusive -- $599

ImpactVision24 2.0

GVP has just updated this exciting product with new software, and a lower price! Feature 24-bit graphics, genlock, framegrabber, 2-input switcher, **Caligari-24, MacroPaint** and much more! Call for complete specs.
Briwall Price -- $1299

Bomac Tower

If you need expandability, the **Bomac Tower** is your ticket! With a full-metal floor-standing case, 4 5.25" drive bays and 4 3.5" bays, there's plenty of room to grow!
Bomac Tower -- $269

May Highlights

AD516 w/Studio 16	$1279
RocGen	$229
VLab	$399
Montage	$379
Video Toaster	$1999
AtOnce Plus	$119
CBM 386 Bridgeboard	$499
DynaCADD 2D	$199
Janus 2.1	$39
SupraFAX v.32bis w/software	$346
Progressive Accelerators	$Call
Opus V4.0	$59
Retina	$499
AmiBack Tools	$59
GVP530 40/1/120	$729
Vidi Sound and Vision	$199
Twin Sound Stereo System	$99
Trifecta LX SCSI-2/IDE	$199
TV Paint Jr.	$349
GVP G-Lock	$399
Imagine v2.0 w/Ojects 2	$199
GVP 1230-40/40/4	$Call
Roctec Ultralite Floppy	$89
DeluxePaint IV AGA	$129
Pixel 3D Pro	$119
ProWrite v3.3	$64
AD1012 w/Studio16	$519
Xetec CD ROM external	$599
Archive 250MB Tape	$399

Write for your **Free** copy of our **Catalog-On-A-Disk**

DKB Megachip 500/2000

Expand your Amiga's graphics capacity to 2MB of chip Ram! New, smaller version is compatible with all motherboard revisions and configurations.
Megachip 2000 or 500 w/2MB Agnus -- $239
(Please specify NTSC or PAL)

We thought you'd like to know that we:

- Test and Format your Hard Drive
- Test and Install Memory
- Burn-in your Computer
- Burn-in your Monitor
- Customize & Configure your System Purchase
- Offer Memory trade-ins
- Offer full service to APOs, FPOs and CFPOs

GVP Phone Pak

Use the power of your Amiga, along with the GVP Phone Pak to create a complete automated answering machine, FAX machine and voice-mail system. Easy to set up, and it sounds great!
Now just $299

Addison-Wesley ROM Kernal manuals (2.04)

Libraries, Devices, Hardware, Includes, & Intuition Style Guide
Get ALL 5 for $99!

A1000 Owners!

Internal 3.5" Floppy	$129
Insider 2	$139
DataflyerRAM w/2MB	$279
DataFlyer w/120MB	$499
FastTrak SCSI Controller	$199
Keyboard w/adaptor	$99
KwikStart II	$59

Gold Disk
VIDEODIRECTOR



- Complete Video Editing System for everyone with a camcorder, VCR and an Amiga!
- Quickly and easily catalog and edit the best moments from your video tapes!
- Includes hardware to control most camcorders and VCR's!

Only $149!

Call us for ALL your Amiga needs

Also, see the Briwall ad in **Desktop Video World**!

A1200/2000/3000/4000

We offer a complete line of Amiga systems in all price ranges.
Call for info and pricing!

UNLEASH THE POWER!

The Publising Team with the Genie Edge
Buy the Bundle & Save a Bundle
Get Both for Only $239.00!

PROFESSIONAL DRAW 3.0 $129.00





PROFESSIONAL PAGE 4.0 $169.00

Syquest Drives

44MB w/Cartridge	$399
88MB w/Cartridge	$519
105MB IDE (NEW!)	$569

Maxtor MANIA
Great Prices on Great Drives!

From 120MB to 1.7GB...the highest quality drives with the lowest cost per MB. **Call for comparisons!**

DATAFLYER *from Expansion Systems*

Choices and More Choices! Fast, Reliable, and Flexible; all boards are A500/1000/2000 compatible.

SCSI Controller	**$79**	**IDE Controller**	**$75**
A500 Case	**$79**	**A1000 Case**	**$129**
RAM Board	**$99**		



DataFlyer Express for the A500 combines a SCSI or IDE controller with up to 8MB memory in a single affordable case.
SCSI w/120MB drive & 2MB $569
(call for other configurations)

Any Visa or MasterCard accepted with NO surcharge. Hardware shipping charges vary depending on weight and value. Software shipping charges are $6.00 per total order via UPS Ground to anywhere in the continental USA. All orders over $300 are insured at the customer's expense. All returns require an RA#. Please call before returning anything. All refunds are subject to a usage fee. Ad prices are subject to change without notice.

Federal Express Charges for all orders under 20 pounds; 2nd Day Delivery -- $13; Next Day Delivery -- $17. Canadian and Overseas customers are shipped DHL. Call for rates.

Circle 7 on Reader Service card.

AMIGA REPAIR SERVICES

**** 24 HOUR TURNAROUND ****

A 90 day warranty • Factory Trained Technicians and the lowest prices in the USA

A2000 $ 79.95* A500 $59.95*

FACTORY AUTHORIZED SERVICE CENTER

For A1000 ,A3000 And Monitors call

The Amiga Service and Repair Video

This video shows you how to repair your own computer and save big money on repairs. $39.95

Order both videos for only $ 49.95

Upgrade Installer's Video

Many of the repairs we receive are the result of attempted upgrade installations. This Video can help. It shows you how to correctly install the most common upgrades such as 2.0 and ECS chips. $ 19.95

Get on our mailing list. You will receive our free news letter with service tips and great deals on hardware and accesories . Send us your name and address or circle the reader service number .

1-800 967 1073

J & C Repair
RD 2 BOX 9 Rockton Pa. 15856

PA residents ad 6% *call for details

Circle 47 On Reader Service Card.

VISIONSOFT

PO Box 22517 • Carmel, CA 93922

MEMORY	UNIT	2MB	4MB	8MB
4000 32bit SIMM-70	$145.00	—	145	290
4000 32bit SIMM-60	159.00	—	159	310
GVP SIMM 32-60	185.00	—	185	365
1x8 - 80 SIMM	34.00	68	134	268
1x8- 70 SIMM	36.00	72	142	280
4x8- 70, 80 SIMM	139.00	—	139	270
4x8- 60 SIMM	145.00	—	145	280
256x4 - 70 PG ZIP	5.00	80	160	304
256x4 - 70 PG DIP	4.25	68	136	256
1x1 - 70, 80 PG DIP	4.25	68	136	256
1x4- 70 PG DIP, ZIP	19.00	76	152	300
1 x 4 -80 SC ZIP	18.50	—	148	292
1 x 4 -70 SC ZIP	19.50	—	156	308
MBX 1200	159.00	—	295	339
GVP A1230	CALL	—	—	—
BaseBoard	—	162	225	—
DataFlyer RAM	—	162	225	385

DFlyer 500 Exp SCSI.......175 2.5 " IDE 80 MB HD.....279
DataFlyer 1000 SCSL.......159 1.76 MB Floppy Dr ...CALL
GVP A530 Turbo...........859 2.1 ROM Up/G Kit 89
GVP I/O Extender...........229 2.1 Software Only..........45
Supra FAX V32BIS ....295 Amiga 4000............CALL
C-Net BBS Software.....CALL Amiga 1200C.........CALL

ORDERS only: 800-735-2633 VISA MasterCard COD
INFO & TECH: 408-899-2040
Fax: 408-899-8760 BBS: 408-625-6580

Prices and Availabiltiy of Products Subject to Change Without Notice

Circle 86 On Reader Service Card.

Better Prices & Ideas from Better Concepts

KOOL-IT™ Micro Fan Installation Kit drastically reduces the operating temperature of your Amiga's internal chips and all other parts.Guaranteed to prevent system failures (gurus) and chip failure/burn out due to overheating.Keeps your Amiga cool and clean!The fan system Amiga forgot. Installs in seconds. Customized w/heat sink that clamps to cpu (agnus) for 'higher end' Amigas.Avail. for 500,600,1200,2000,3000,4000........$39.95

QWIKA SWITCHA™ 4 socket ROM switcher. Switch from 1.3 to 2.x with space for up to 2 future ROMs......................$32.95

Xtractor+™ The only authorized combination DIP/PLCC Amiga chip puller and TORX screwdriver for easy, no hassle entry to motherboard. No more ruined chips w/this futuristic tool. Don't be fooled by imitations. Buy the original one piece tool.......$ 12.95

GURU DIAGNOSTIC KIT Combination software & manual to correct almost any AMIGA problem (A500/A2000)..$9.95

IMAGEWARE PD LIBRARY

GAMES GAMES GAMES
XXX PIC'S XXX ANIM'S XXX MOVIES
NEW EUROPEAN DEMOS

Hundreds of disks loaded with games, demos and much more! (Send $2 for full listing and free sample disk)
As low as $1.69 each!! Also Fred Fish disks for $1.50 each!

DKB Megachip2000 w/2mb agnus & diag. disk.................$ 249.95
DKB Insider II w/0k adds up to 1.5 mb for A1000.............$ 145.50
DKB Kwikstart II Rom switch for A1000...........................$ 58.50
Microbotics MBX1200 14, 25 or 50mhz - $$Call for latest prices!
A4000/Microbotics 70ns SIMM 4Mb $145.95 - 8Mb $325.95
A600/A1200 PCMCIA Fast ram card 2MB$136.50- 4MB $214.50
Exp. Systems A601-exp. A600 total 2mb chip ram-w/0k.....$ 23.50
ICD AdRAM 540 w/0k-up to 4 mb ram internal-A500.........$ 88.50
Maxtor 2 ½" Low profile IDE 85mb HD internal for A500, A600, and A1200..$ 225.95
Commodore 1084S Monitor Brand New...........................$ 269.95
8372A 1Mb Fatter Agnus w/instr. & test disk.......................$ 42.95
8373 Super Denise w/test disk & instructions.......................$ 28.95
8520 A CIA $ 11.50 ea. - Two w/free diag. chart for $ 22.00
2.1 Complete upgrade kit $ 76.50 1.3 ROM only $25.95
Video Toaster 2.0 $1949 ICD Flicker Free Video II $227.95
Supra 2400 Modem $ 64.95 Roctec Amiga Mouse $ 22.95
Eureka 400 D.P.I. Hand Scanner B & W ....$ 149.95
Eureka 512K RAM Expansion for 500 ....$ 32.95
BIGFOOT A500 200 watt Power Supply ....$ 83.95
New! HD drives for A500,A2000&A3000-$$Call for latest prices!
New! Flicker Blaster for A500/2000 ....$ 229.95
New! 600 Amiga Color Clip Art ....$ 20.95
Directory Opus 4.0 $55.95 ProWrite 3.3 $53.95 BAD 4.0 $29.95
Check, Money Order, C.O.D. & Dealer Net Terms!!
Shipping : Add $ 5.00 - C.O.D's Add $ 4.00

BETTER CONCEPTS, INC. 22 North Main Street
Suite 393 New City, N. Y. 10956 1 800 25 AMIGA (Sales)
(914) 639 - 5095 NY Residents, Info and Customer Service
(914) 634 - 7097 Fax Call Us For Any Amiga Item !!
FREE Disk packed w/latest PD stuff with every order!!!

Circle 151 On Reader Service Card.

ULTRA HIGH RESOLUTION

4x5 COLOR TRANSPARENCIES and 35mm COLOR SLIDES

from COLOR POSTSCRIPT • 24-BIT IFF • HAM • Standard IFF

• Over 4000-line Resolution • NO Scanlines • NO Curvature Distortion • Brilliant Color

HAMMOND PHOTOGRAPHIC SERVICES
(310) 390-3010

Call or Write for order form, price list & sample:
11280 Washington Place
Culver City, California 90230

Fast RAM PCMCIA FORMAT

For Amiga A600/HD & A1200
2MB, 3MB, & 4MB

1·800·CARDS 4U

NEW MEDIA CORPORATION

Made in U.S.A. Irvine, California U.S.A. (714) 453-0100

Circle 50 On Reader Service Card.

HA!

We Still Have it ALL!!! Over 2000 Disks of the finest in AMIGA PD/Shareware!! AMOS PD, Games, Utils, Music, Graphics, Business, Educational and MORE!!! All Our Disks are $2.00 or LESS!!! FISH Disks still just $1.50 (- S&H). WA Residents add 8.2% tax

Check us out, check our deals, You can't go wrong!!

WANT GAMES?!? Our Top 10 Games disks only $17.00! Or, 5 disk Sample Pack only $6.00! OR Catalog and Sample Disk only $2.00! OR Call for free Catalog!!!

We Accept Cash, Checks, Money Orders & C.O.D.'s Visa/MC Coming Very Soon!!

(206)351-9502) If we don't have it, It's probably Lame!!!

NorthWest Public Domain - P.O. Box 1617 - Auburn, WA 98071-1617

Circle 170 On Reader Service Card.

Do you own your Art Department or does it own you?



Get help from

THE BEGINNERS GUIDE TO ART DEPARTMENT PRO 2.+

Video Tutorial and show it who's Boss!

To order for $39.95 call 1-800-453-8308 anytime.

FREE information packet call 602-893-3988

or write to: *AW Art Pro, 5037 East Keresan Phoenix, Arizona 85044. MC, Visa, Money orders, checks, COD's(extra) Welcome. Open 7 days/24 hrs*

Circle 163 On Reader Service Card.



$129.00

BIGFOOT Power Supply

200 Watt Fan Cooled A-500/600/1200 Power Supply. Will Handle Virtually Any Add-on Device Imaginable! Power Accessories Externally And Save Wear And Tear On The Motherboard.

Attention!

We Have 200/250/300 Watt 2000/3000/4000 Power Supply Solutions Great For Toasters!

Pyramid Hand Scanner

400 D.P.I. 16/32 Level Grey-scale Scanner. Text/Halftone & Grey-Scale Modes. Great For DTP And Drawing/Paint Programs. Saves 16/32 Level Grey IFF



$229.95

Pyramid Hand Scanner Is The Only Amiga Scanner To Come With A Parallel Pass Through Interface!



$39.95

Swifty Mouse

True Three Button, High Resolution Micro Switch Mouse. Great With Brilliance, Directory Opus & Others.

Handy Mouse

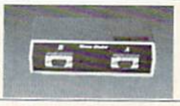
Two Button Micro Switch Based Amiga Replacement Mouse.



$34.95

Pyramid Mouse Master

Automatic Switch For The Amiga Mouse/joystick Ports. Select Between Mouse Or Joystick Simply By Pressing The Fire Button On Whichever Device You Need.



$49.95

Slingshot

A-2000 Slot For A-500 Use A-2000 Cards On Your A-500! $39.95



$59.95

Pyramid Midi Interface

Great Amiga MIDI, Includes Serial Pass Through Port and Multiple MIDI Connections, 1 In, 2 Out & 2 Thru!

Pyramid RAM

A-501 Clone W/Clock Etc. $49.95
A-601 1MB W/Clock Etc. $99.95
Coming Soon A-1200 RAM Expansion



$55.95

Pyramid Sound Enhancer

Improve The High End Sound Output Out of Your Amiga. A Must If You Record Sound To Video Tape etc.!

New Multi-Face Card A-2000/3000/4000 High Speed Dual Serial & Dual Parallel Port Board $299.00

Pyramid Stereo Sampler

High Speed Stereo Sound Sampler W/Input Level Controls & Microphone Input Jack. $69.95

Amiga IDE Cables

$14.95

Flicker Blaster!

Flicker Remover & Audio Amp. $249.00

Loup City, Nebraska 68853
Micro R. & D.
TOLL FREE 1-800-527-8797

Pyramid ROM Switch Only $39.95
Keyboard/Mouse Controlled

Contact Your Dealer or Micro R.&D.
Visa/MC/COD
(308) 745-1243 Voice
(308) 745-1246FAX

Circle 99 On Reader Service Card.

THE LAST WORD

Kudos, complaints, comments, concerns, and contributions from our readers.

Slightly Off Key

I was distressed to find that Gene Hamm's "Music of the Spheres" (Mar. '93, p. 53) was slightly tarnished. Although his circle of fifths fit me like a glove, a technical error in the diagram left me composing some highly unusual chords.

A few days after reading the article, I showed my choral director Hamm's article. She thumbed through the pages, tried a few chords on the circle and shook her head, saying, "This is wrong." I was crestfallen.

As it turns out, the diagrams of the circle of fifths were misdrawn. The positions of B flat and E flat in the major chord progression in the outer rings of the diagrams should have been reversed. They should read C, F, B flat, E flat, A flat, and so on. Having made this switch, Mr. Hamm's theory once again fit like a glove.

Brian Metcalf
Sandy Hook, Connecticut

We've received a bunch of letters about this problem. Several professional musicians also expressed dismay that the article seemed to suggest that the Amiga could make you a composer "whether you know anything about music or not." While we stated upfront that it was for "people who want to create music on the Amiga, but know little about music composition," whether you're a novice or a professional, B flat isn't E flat, and vice versa. Our apologies. —Eds

Losing Some Zip

In the March On-Line Scan section, Tim Walsh referred to several archival programs, one of which was PKAZip. *AW* readers should know that P.K.Ware will no longer be supporting the Amiga. Yep, PKAZip 1.0 is the first and last version of the program for the Amiga, according to the message I got through P.K.Ware's BBS. It's too bad, too, because PKAZip is one of the best archival programs ever written for the Amiga. I hope revisions will come from other programmers so Amiga users such as myself can continue to take advantage of the thousands of "ZIPped" programs available on BBSs.

Mark A. Tomany
Minooka, Illinois

Keep Carving, CBM

While some see the introduction of a new line of Amigas as creating a confusing list of options, I see the new machines as welcome additions from a company determined to carve out a sizable niche in the marketplace. Even the bookstore in my town now shelves two Amiga-specific magazines (*Amiga-World* and *Amazing Computing*), which I consider a step—no matter how small—in the right direction.

Jim Heffernan
Harrisonburg, Virginia

We think it's a giant step! (But gee, Jim, did you have to go and mention that other magazine by name?) —Eds

Great at Science Too

Recently I read an interesting survey in *Personal Engineering and Instrumentation News* in which the Amiga was mentioned. Apparently, 4% of the scientists and engineers who responded claimed the Amiga as their computer of choice. (I was one of them, incidentally.)

The A4000 is well suited for use in scientific laboratories as an instrument controller and multimedia workstation. This is important in an area where technical, abstract information needs to be gathered, analyzed, and finally presented in an easily understandable way, especially to a potential client.

We need *AW's* continued support to raise the scientific community's awareness of the Amiga's high potential.

James J. Yuzwalk
Livonia, Michigan

The A4000 is well suited for use in scientific laboratories as an instrument controller and multimedia workstation.

Still the One

In your February Overscan piece on the CyberArts conference, Patric Hedlund claims that most multimedia development and applications are for the Mac. I've been selling multimedia products to studios, including Disney and Warner Bros., for quite a while (all the major platforms), and I can tell you that the Amiga is still easily the leader in multimedia. QuickTime for the Mac doesn't even come close to the professional quality of the Amiga.

Adam Strange
Valley Village, California

What Mr. Hedlund said was that most American multimedia developers use a Silicon Graphics workstation or a Macintosh, but he preceded the statement with John Donovan's point that the Amiga, because of its "inherent architectural advantages," among other things, made it "the power platform for the future of multimedia."

Is It in the Cards?

Your February editorial, "Commodore Users at the Crossroads," forecasts what I think most high-end Amiga owners want: AGA for the A2000 and A3000. An AGA card would be a total winner. For Amiga owners who can't afford to upgrade to an A4000 it would seem to be the logical next step.

J.C. Comerford
Woodland Hills, California ■